TECHNICAL INFORMATION
G1000 / G2000 Dishwashers

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Warnings and Safety Information

Service and repair work should only be carried out by suitably qualified persons in accordance with all appropriate local and national safety regulations.

Before any service work is started, the appliance must be disconnected from the power supply.

If it is necessary to tip the machine when working on the lower areas, it may only be tilted onto its back. On models with salt container in the sump, the following must be performed:

Empty the water inlet mixer: Open the salt container cap briefly, reinstall the cap and ensure it is firmly secured. Any remaining water should then be removed from the cabinet.
Upon completion of any service procedures, a short wash program without load should be run. This is to remove any salt residues that might be present and prevent possible corrosion.

If the retaining nut to the salt container becomes loose during repair work, the salt container can slip out of the connection to the water inlet mixer. Should this occur the salt container must be dismantled. To avoid leaks and additional procedures ensure the salt container is supported via the service opening.

Do not tilt the unit onto its right side, as this would cause water to run into the fan.

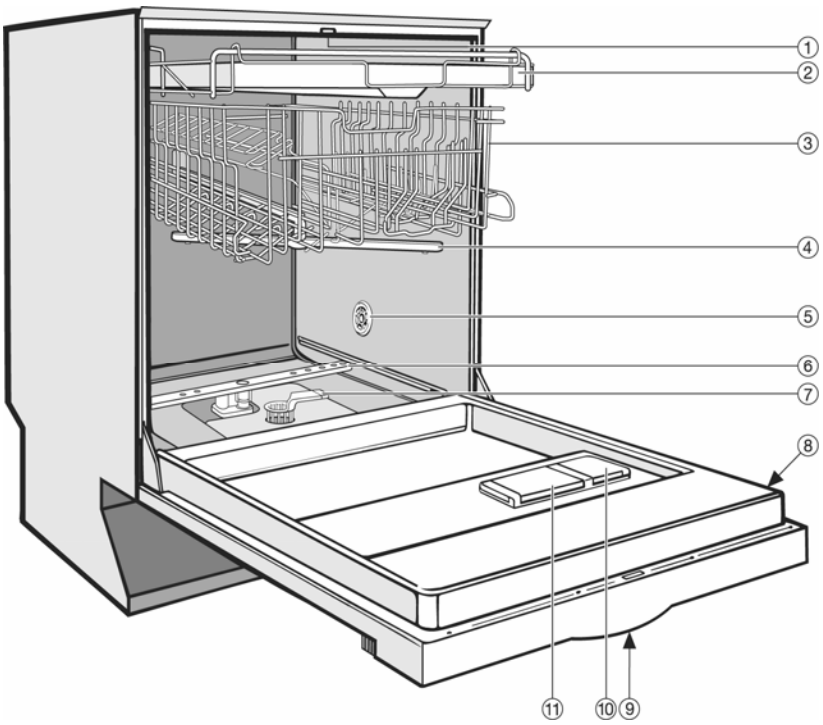
Many procedures will require the machine to be placed on its back. Care should be taken to avoid damage to the water hoses and power cord.

For questions, concerns, clarifications or further assistance contact the Miele Technical Support Center at 1-800-999-1360.

1.0 Construction and Design

1.1 Appliance Overview

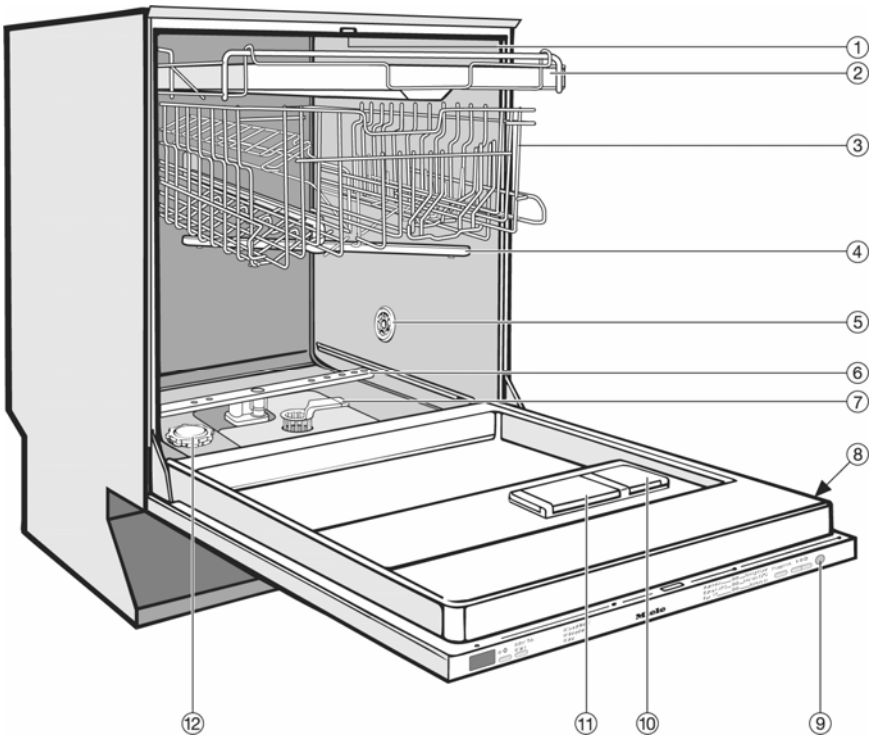
1.1.1 Appliance Overview – Typical Integrated Model



1 Upper Spray Arm (Not Visible)
2 Cutlery Tray (Depending On Model)
3 Upper Basket
4 Middle Spray Arm
5 Air Inlet For Drying (Depending On Model)
6 Lower Spray Arm
7 Filter Combination
8 Data Plate
9 Child Safety Lock In The Door Handle (Not Visible)
10 Rinse Aid Reservoir
11 Dual Compartment Detergent Dispenser

Figure 1-1: Appliance Overview (Typical Integrated Unit)

1.1.2 Appliance Overview – Typical Fully Integrated Model



1 Upper Spray Arm (Not Visible)
2 Cutlery Tray (Depending On Model)
3 Upper Basket
4 Middle Spray Arm
5 Air Inlet For Drying (Depending On Model)
6 Lower Spray Arm
7 Filter Combination
8 Data Plate
9 Optical Interface
10 Rinse Aid Reservoir
11 Dual Compartment Detergent Dispenser
12 Salt Container

Figure 1-2: Appliance Overview (Typical Fully Integrated (Vi) Unit)

1.2 Controls Overview

Controls on Miele dishwashers are categorized into four (4) types:

Control Type	Description
Novotronic	Each Novotronic model dishwasher can be operated with a single knob. Surface mounted design technology (SMD) allows Miele Novotronic components to be extremely durable and reliable. These controls are capable of performing hundreds of tasks, which cannot be handled by mechanical components.
Touchtronic	This series of Miele dishwashers is operated by pushing a single button – no separate temperature or drying selections – just turn the machine on, select a program and Miele does the rest. All models include a diverse group of wash programs for multiple cleaning needs. Models are designed to maximize cleaning results and optimize water and energy conservation.
Incognito (Fully Integrated) (Vi)	The Incognito (fully integrated) series dishwashers have the program controls located on the top edge of the door; and are accessed while the door is open. Neither seen nor heard, the Miele Incognito Series OCI (Optical cycle Indicator) allows you to see the progress of the dishwasher cycle by way of a red light, which is steady or flashing depending on the status of the cycle.
Navitronic	The Navitronic Touch Display consists of two electronic boards located behind the control panel. The front program electronic board contains pad sensors, which respond to finger contact. Three touch pad sensors are present on each side of the display to control the menu items displayed next to them (indicated by a small arrow) within the display area. During operation the display will show: The program name The current time of day The program sequence The approximate remaining time Faults and messages

Table 1-1: Controls Overview

1.3 Types of Dishwashers

1.3.1 Pre-Finished

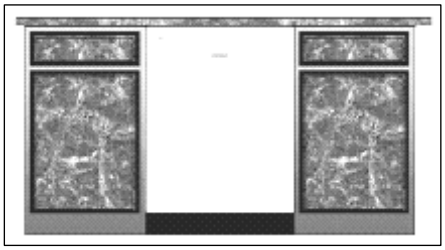


Figure 1-3: Pre-Finished Dishwasher

The pre-finished construction consist of a pre-assembled door panel and control panel; making it an ideal replacement unit. Available in white, black or stainless steel.

1.3.2 Integrated

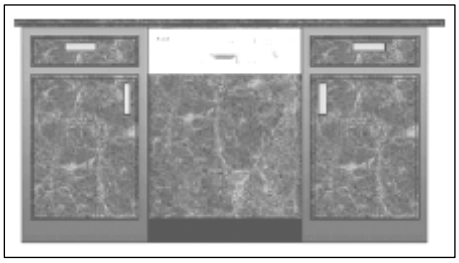


Figure 1-4: Integrated Dishwasher

Integrated dishwashers ship with a separate control panel, and optional GDU (door) panel. Every Integrated dishwasher ships with a bracket for installing a custom cabinet panel. The use of separate components allows for a truly customized installation.

1.3.3 Fully Integrated

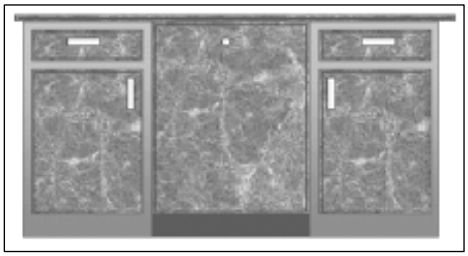


Figure 1-5: Fully Integrated (Incognito) (Vi) Dishwasher

Fully Integrated Dishwashers are designed to blend into the surrounding cabinetry. The operator controls are only available when door is opened. Each dishwasher is shipped with a bracket for securing a custom cabinet panel. An optional Miele stainless steel SCVi panel is also available.

1.4 Technical Data

1.4.1 Electrical Information

Power Requirements: 120 VAC, 60 Hz
Rated Load: 12.5 A / 1500 W (typical)
Circuit breaker: 15 AMPS

The appliance is equipped with a 4 ft power cord and molded NEMA 515 plug; for connection to a NEMA 5-15R receptacle (120VAC, 15 Amp, 3 prong, grounded outlet).

It is recommended that the power outlet for the appliance be installed on the wall (within the cabinets), adjacent to under counter space where the appliance is installed.

Ensure the cabinets contain no rough edges that could damage the power cord or drain hose. If metal cabinets are used, ensure a rubber grommet is installed around the opening.

Always exercise care when sliding the dishwasher in or out, to prevent damaging the power cord and / or hoses.

Hard Wire Electrical Connection
Connections: L1 (Black) to L on terminal block, N (White) to N on terminal block,

GND To ground connector.

Hard wiring the dishwasher should only be done if required by electrical code.

Do not cut the plug off the power supply cord / plug and connect it directly to the house wiring under any circumstances. This voids the warranty.

For hard wiring, the power cord must be removed from the appliance by disconnecting the cord from the terminal box located at the lower left front of the dishwasher, behind the Toekick and Service Panel. Pass the permanent power supply cable through the strain relief and secure it directly to the terminal box.

THIS APPLIANCE MUST BE GROUNDED

1.4.2 Plumbing Connections

1.4.2.1 Intake Connection

The appliance is equipped with a five (5) foot long Double WaterProof System Intake Hose; equipped with a ¾ inch female hose connection; for connection to a ¾ inch male hose thread water supply valve.

1.4.2.2 Drain Connection

The appliance is equipped with a five (5) foot long Drain Hose for connection to a ¾ inch drain nipple.

1.4.3 Dimensions

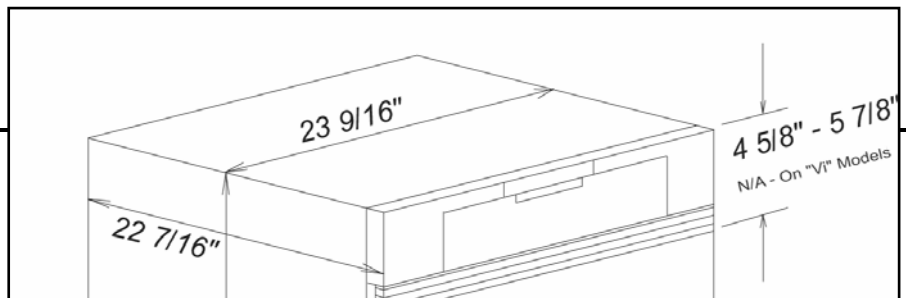


Figure 1-6: Dimensions

For the latest product specifications, including product dimensions visit: Miele.com

1.5 Data Tag

1.5.1 Data Tag - Location

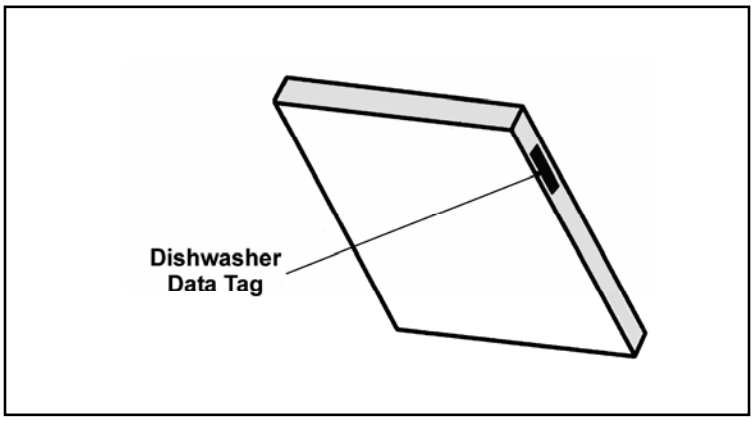


Figure 1-7: Data Tag Location

1.5.2 Data Tag – Information

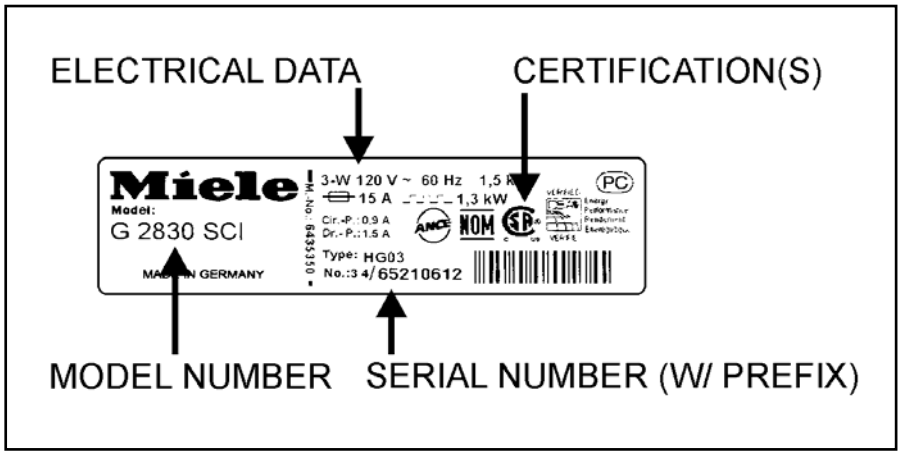


Figure 1-8: Data Tag Information

1.6 Model Numbering

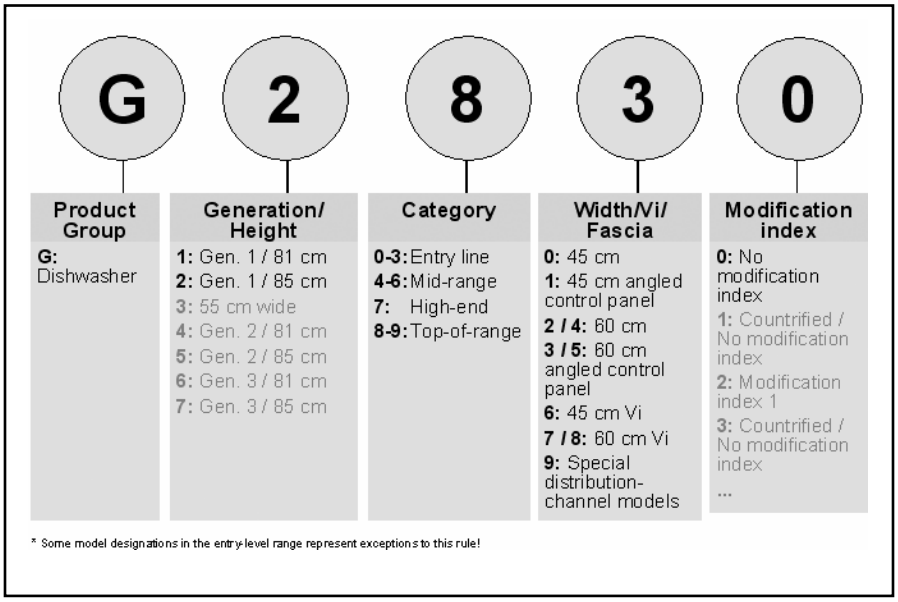


Figure 1-9: Model Numbering

1.6.1 Mode Numbering – Overview of USA Model Numbers

Advanta Series	G2020 G2020SC	G2170Vi G2170SCVi	-
Inspira Series	G2140 G2140SC G2140i	G2150 G2150SC	G2180Vi G2180SCVi G1180SCvi
Optima Series	G2420SCi	G2430SC G2430SCi	G2470SCVi G1470SCVi
Excella	G2630SCi	G2670SCi	-
LaPeral	G2830	-	-

Table 1-2: Overview of US Model Numbers

1.7 Door Springs / Weights – Specifications

Springs should always be installed in matching pairs

Model	Color	Tensile strength (N)	Length (mm)
G1xxx, free-standing, built-under	Orange	Approx. 230	150
G2xxx, built under	Blue	Approx. 290	157
G1xxx, (I) (VI)	Uncolored	Approx. 320	156
G2xxx, (I) (VI)	Green	Approx. 410	155

Table 1-3: Door Spring Summary

Door panel weights/tension springs – factory

Series	Control panel type	Color	Max. weight of front panel (Kg)
G1xxx I	Synthetic fiber	Uncolored	10
G1xxx I	Stainless steel	Uncolored	9
G2xxx I	Synthetic fiber	Green	13
G2xxx I	Stainless steel	Green	11

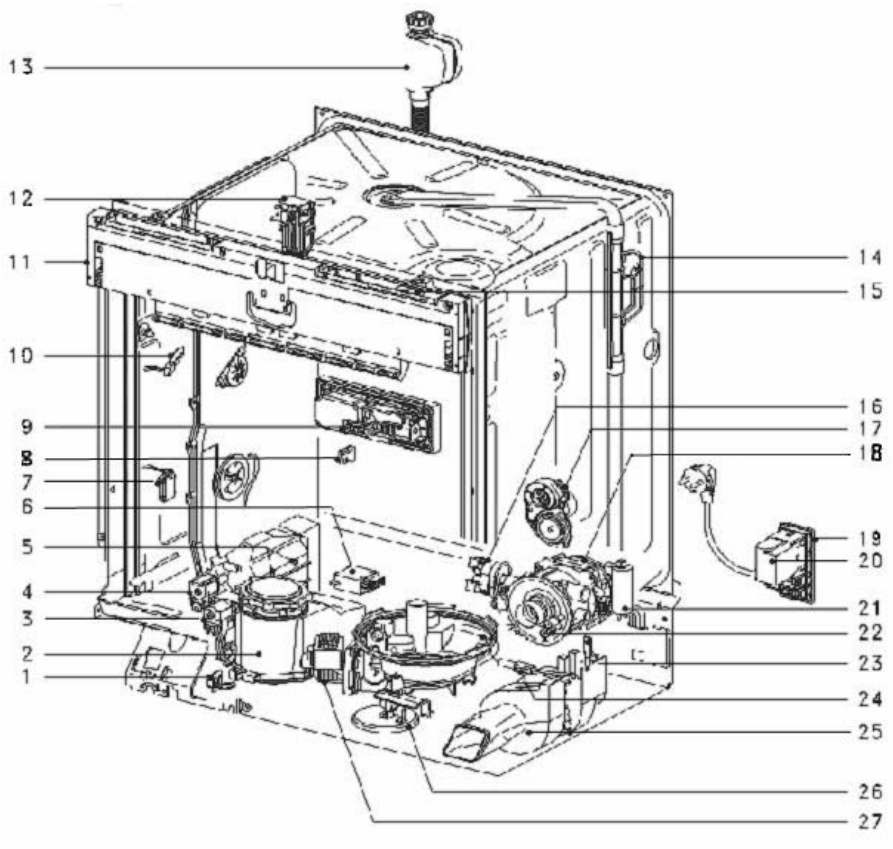
Table 1-4: Panel weights/tension springs in delivery condition

Door panel weights/tension springs - service installed versions

Series	Control panel type	Color	Max. weight of front panel (Kg)
G1xxx I	Synthetic fiber	Green	15
G1xxx I	Stainless steel	Green	14
G2xxx I	Synthetic fiber	-	-
G2xxx I	Stainless steel	-	-

Table 1-5: Panel weights/tension springs in customer service version

1.8 Layout of Components (Typical)



1. Reed switch salt, B8/2
2. Salt reservoir
3. Solenoid valve (reactivation) Y38
4. Solenoid valve (water hardness) Y5
5. Sensor softener, 10N1
6. Heater relay, K1/1
7. Spray arm sensing (middle) 4N1
8. Reed switch rinse aid, B8/1
9. Combi-Dispenser solenoid, Y50
10. Flowmeter, B3/4
11. Module tray electronic, 1N1
12. Door contact switch, S24
13. Water Intake valve (water intake) Y2
14. Turbidity sensor, B3/10
15. Main switch, S2
16. Heater Pressure switch, B1/13
17. Slide shutter, M24 and B3/12
18. Circulation pump (MPEW), M6
19. Main power socket, X3/1
20. Interference suppressor, Z1
21. Capacitor circulation pump, C6
22. Heater, R1
23. Speed sensor, B3/9
24. Temperature sensor (NTC), R30
25. Fan, M2
26. Overflow reed switch, B8/3
27. Drain pump, M8

Figure 1-10: Layout of Components

2.0 Installation

Refer to the Residential Appliance Installation Manual.

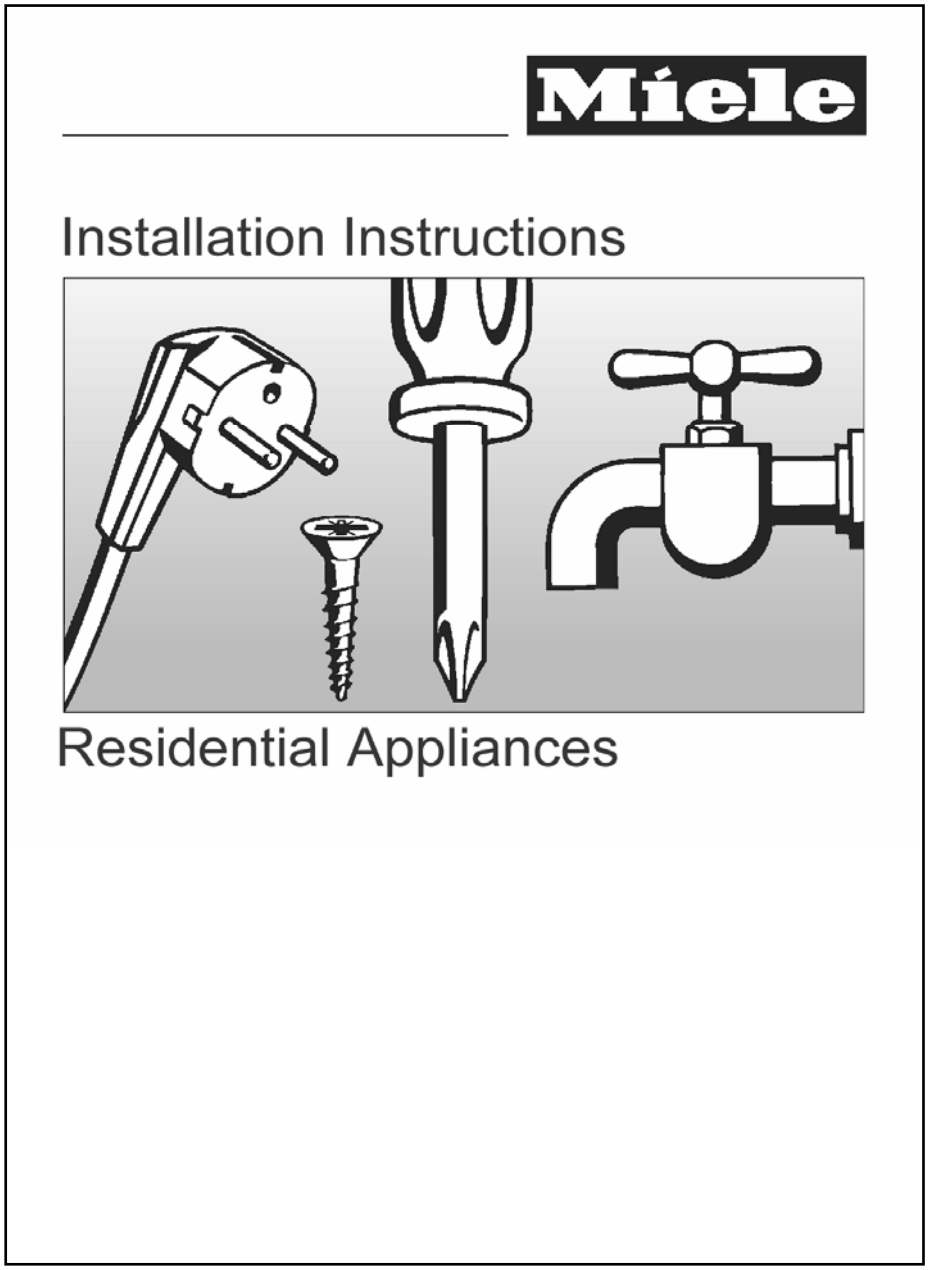


Figure 2-1: Installation Manual (Typical)

3.0 Commission and Operation

3.1 Door Handle / Lock – Prefinished & Integrated Models

To open the door: Press the release inside the door grip (Figure 3-1). To close the door: Push door closed, until an audible click is heard.

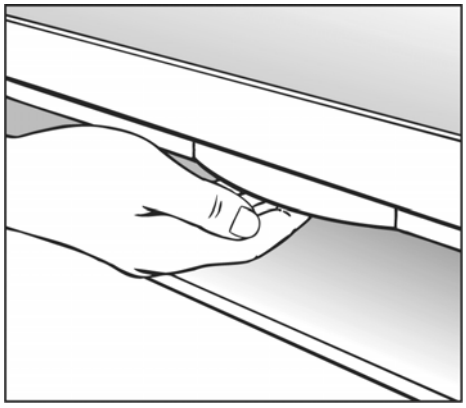


Figure 3-1: Door Handle Release

Note
If the door is opened during operation, the dishwasher will stop running. Once the door is closed the program will restart.

3.2 Child Safety Lock

Refer to Figure 3-2.
To lock the door: push the slider below the door grip to the right
To unlock the door: push the slider to the left. See Figure 3-2.

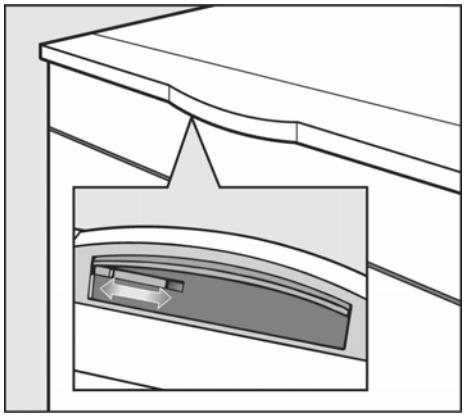


Figure 3-2: Child Safety Lock

3.3 Water Softener

If your tap water hardness is above 8 grains per gallon (140 ppm), the water should be softened.

If the Water Softener is needed (for select models only):
The water softener sets automatically to the local water hardness.

Note
The water hardness level can be programmed manually. See Diagnostic Modes 6.1 or Operational Manual.

If the water softener is needed the salt reservoir must be filled – refer to 3.3.1 through 3.3.2 for details.

If the Water Softener is not needed (for select models only):
The "insufficient salt" message will turn off automatically.
Salt is not needed and should not be installed.

3 in 1 tablets and salt usage
When using 3 in 1 tablets (containing detergent, rinse aid, and water softener salt) the "3 in 1" detergent setting should be selected. Use of 3 in 1 tablets will reduce salt consumption of the machine to between a quarter and third of normal usage amounts.

3.3.1 Water Softener Salt – General Information

Only use water softener salt specially formulated for dishwashers. Other salts may contain insoluble additives that impair the Water Softener. The proper salt can be purchased from Miele Technical Service Department.

3.3.2 Water Softener Salt – Adding

For models with salt reservoir located in bottom of the cabinet

1. Remove the Lower Basket.
2. Unscrew and remove the Salt Reservoir Cap located on the floor of the Wash Cabinet.
3. If this is the first time salt is installed; add 2 quarts water.
4. Place a funnel over the Salt Reservoir.
5. Carefully fill reservoir with salt.
6. Clean any excess salt from the threads of the reservoir opening; and screw the cap on firmly.
7. Run the" Rinse & Hold" program to remove any traces of salt from inside the Wash Cabinet.

The Salt Reservoir holds approximately 4.5 lbs (2 kg) of salt

For models with salt reservoir located on the inner door

1. Open door and hold at an angle, so that the salt container can be completely filled.
2. Open salt reservoir by pressing the button in the direction of the arrow until the flap springs open - as shown in Figure 3-3.
3. Open the built in funnel, carefully fill with salt until water runs out.
4. Clean any excess and/or spilled salt.
5. Close the funnel and lid firmly.
6. Run the “Rinse & Hold” program to remove any traces of salt from inside the wash cabinet. Should the display shows “Insufficient salt”, refill the salt after the program has finished. Confirm with “OK”. The message will clear from the display.

The salt container holds approx. 2.2 lbs. (1 Kg) of salt.

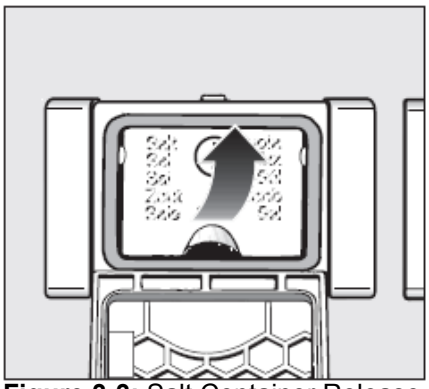


Figure 3-3: Salt Container Release

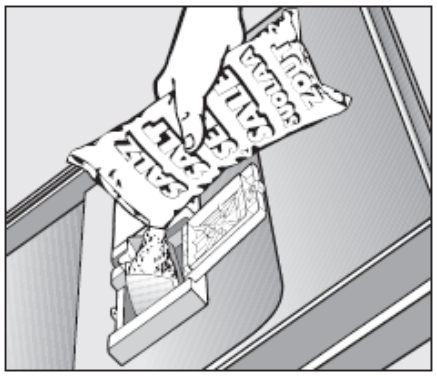


Figure 3-4: Filling the Salt Using the Built In Funnel

3.4 General Operation

3.4.1 Novotronic Controls

1. Ensure the Spray Arms are not blocked.
2. Close the door.
3. Turn on the dishwasher. The “Start” Indicator will flash.
4. Select a wash program by turning the Program Selector to the left or right to the desired wash program.
5. Press the “Start” button.

3.4.2 Touchtronic & Navitronic Controls

1. Ensure the Spray Arms are not blocked.
2. Close the door.
3. Turn on the dishwasher. The main menu shows in the display (Figure 3-5). If the memory function is selected, the last selected program is displayed.

Figure 3-5: Display (Main Menu)

Note
Information about the selected program can be displayed by touching the i control.

Select the desired program. The display changes to the program menu (Figure 3-6)

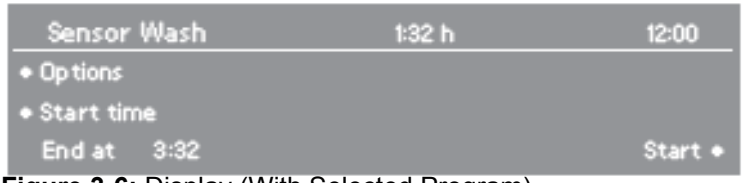


Figure 3-6: Display (With Selected Program)

Select the desired options; a √ check will appear next to the option selected. See Figure 3-7.

Figure 3-7: Display (With Selected Options)

When finished customizing the program, confirm with OK.
Select Start.

3.4.3 Fully Integrated (Incognito) (Vi) Controls

1. Open the door.
2. Ensure the Spray Arms are not blocked.
3. Turn on the dishwasher. The main menu shows in the display (Figure 3-8).

Figure 3-8: Display (Main Menu)

Note
Information about the selected program can be displayed by touching the i control.

4. Select the desired program. The display changes to the program menu (Figure 3-9).

Figure 3-9: Display (With Selected Program)

5. Select the desired options; a √ check will appear next to the option selected. See Figure 3-10.

Figure 3-10: Display (With Selected Options)

When finished customizing the program, confirm with OK.
Select Start. Close the door.

Note
For specific program details and further information on operating the dishwasher refer to the model specific Operating Manual.

4.0 Description of Function

4.1 Cabinet Construction

The inner cabinet is constructed of stainless steel (1.4301) welded onto four (4) vertical U-section sub-frames. The cabinet is sound and heat-insulated with bitumen and/or mineral wool matting.

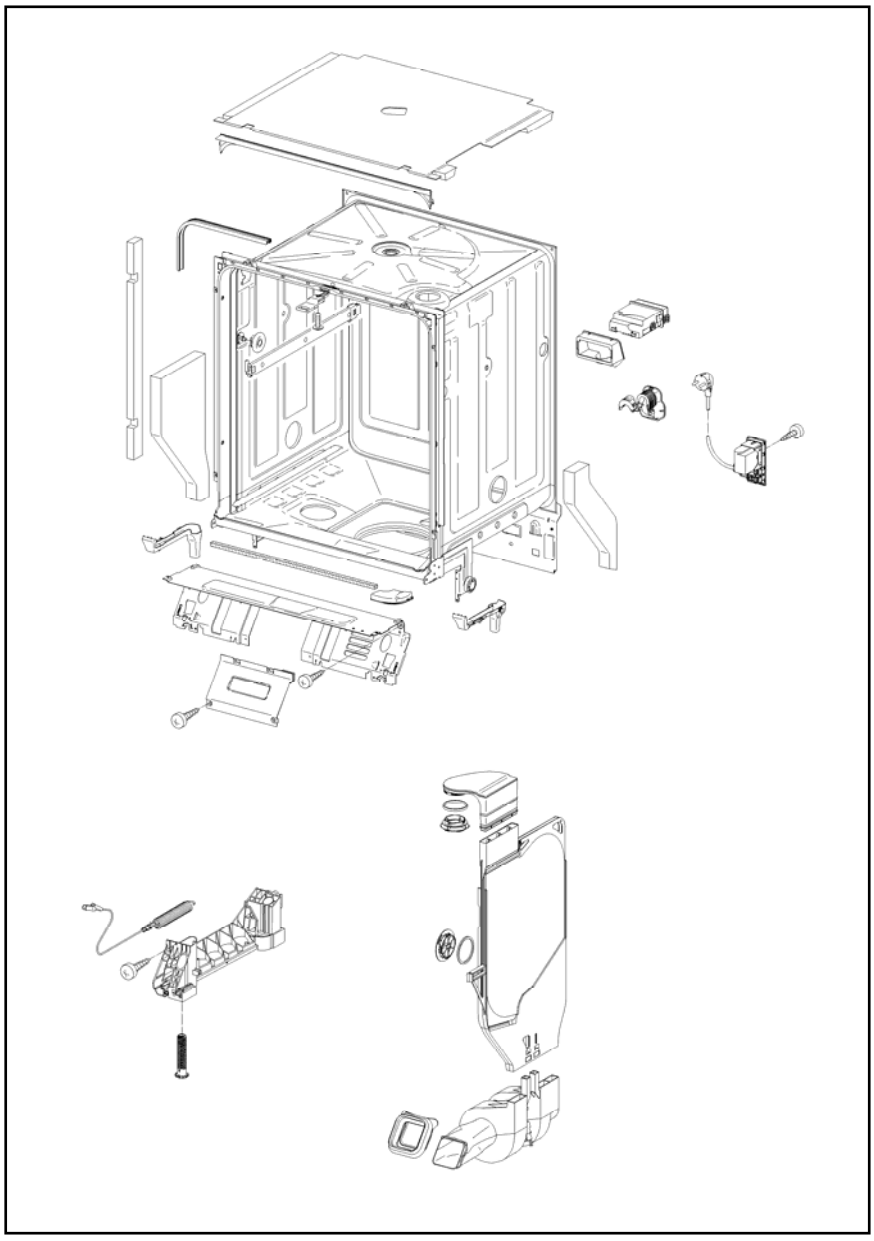


Figure 4-1: Inner Cabinet

4.2 Water Intake

4.2.1 WaterProof System (WPS)

The Water Inlet Valve (Y2) consists of two (2) electro-mechanical valves mounted within a waterproof box located at the water connection (end of the water intake hose).

The valves are mounted in physically and electrically in series to ensure that if one valve should fail (e.g. due to blockage caused by a foreign body) the water flow will still be switched off by the other valve.

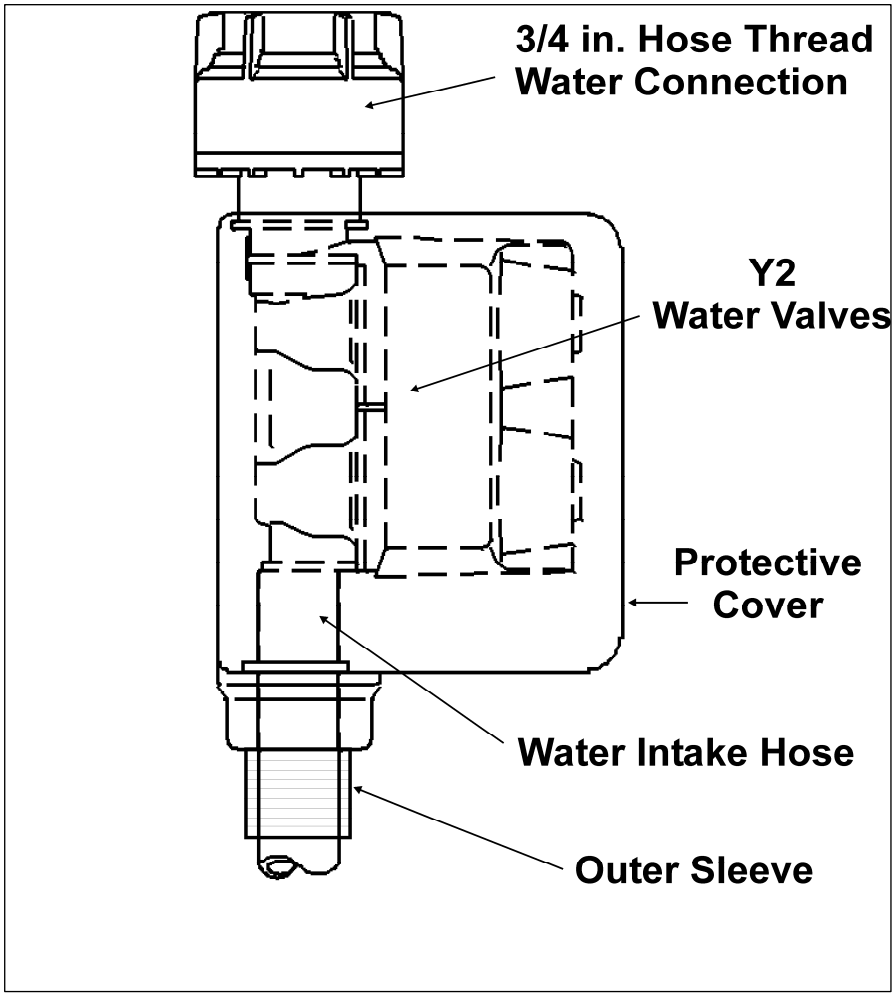


Figure 4-2: WaterProof System Intake Valves

The WaterProof System (WPS) consists of a number of interdependent safety features, which provide protection against water leakage.

1. **Protection against solenoid valve leakage:**
   Each water intake is controlled by an inlet valve. If this valve cannot close properly due to some defect or blockage by a foreign body, a second inlet valve ensures that the water supply is shut off.

2. **Protection against water intake hose leakage:**
   If a leakage occurs, water flows along an outer hose sleeve surrounding the intake hose to the drip tray. Here a float switch then acts to switch off a micro-switch, which closes the inlet valves to cut off the water supply.

3. **Protection against dishwasher overflow:**
   If some defect has caused the water level in the appliance to rise so that it overflows into the drip tray, and the water quantity sensor has also failed, the float switch is activated. This switches off a micro- switch, which closes the inlet valves to cut off the water supply. At the same time the drain pump is activated.

4. **Protection against drain pump failure or blocked drain path:**
   In this case the water level in the appliance rises until it overflows into the drip tray where the float switch is activated. This switches off a micro-switch, which closes the inlet valves to cut off the water supply.

Warning
If the WaterProof System (WPS) is replaced, always ensure the correct flow restrictor is installed.

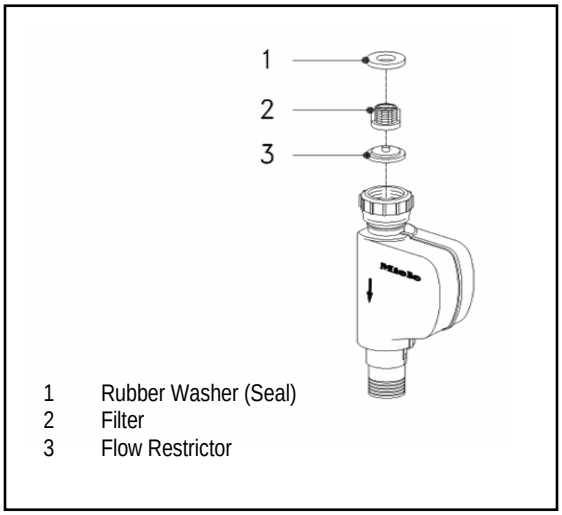


Figure 4-3: WaterProof System Flow Restrictor

4.2.3 Water Inlet Mixer

Water is taken into the appliance via the inlet valve and the water inlet mixer, through the ion exchanger (water softener) into the sump. The water softener resin (for reactivation) is located at the bottom of the water inlet mixer. The assembly also contains the EGS valve (for the electronically controlled water softener) reactivation valve and a built in flow meter. The spray arm sensors are also positioned within the assembly (on appropriate models that include spray arm sensors).

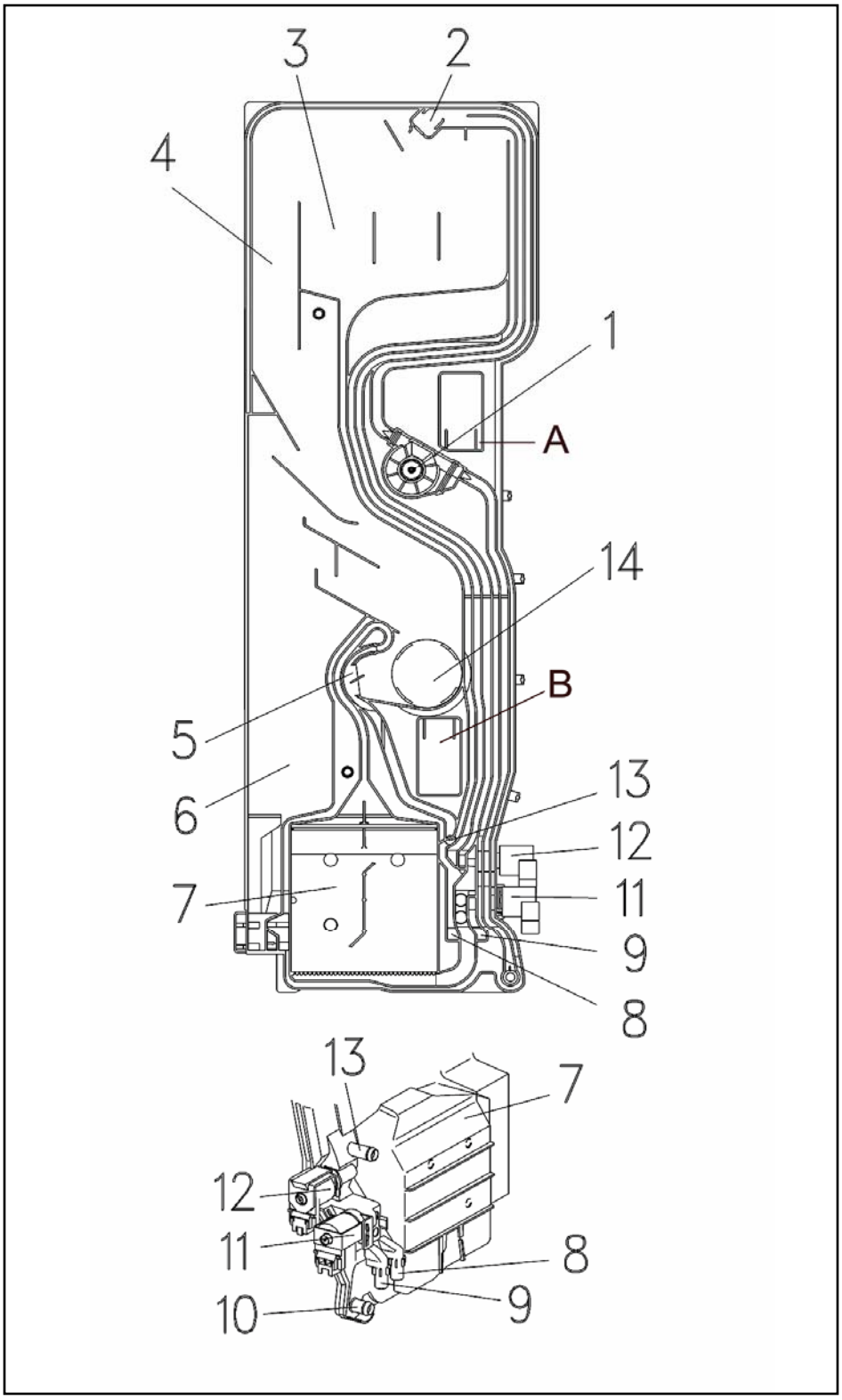


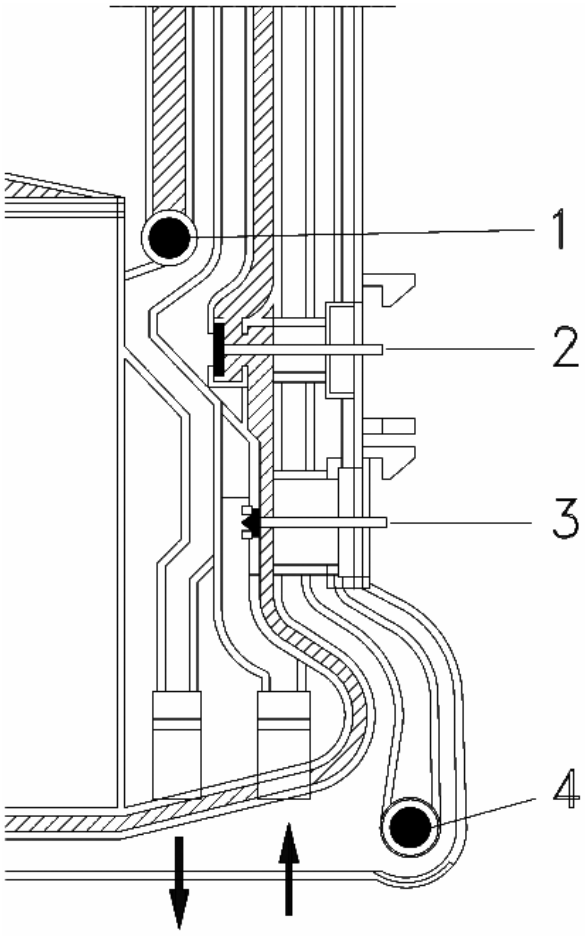
Figure 4-4: Water Inlet Mixer

Component List – Refer to Figure 4-4.

1. Flow Meter B3/4
2. Ball Valve
3. Water Reservoir – Softener Reactivation
4. Overflow
5. Non-return Device
6. Vent
7. Ion Exchanger
8. Water Outlet to Salt Container
9. Water Intake from Salt Container
10. Connection to Inlet Valve
11. Reactivation Valve
12. EGS Valve
13. Water Outlet to Sump
14. Cabinet Water Inlet

A. Middle Spray Arm Sensor
B. Lower Spray Arm Sensor

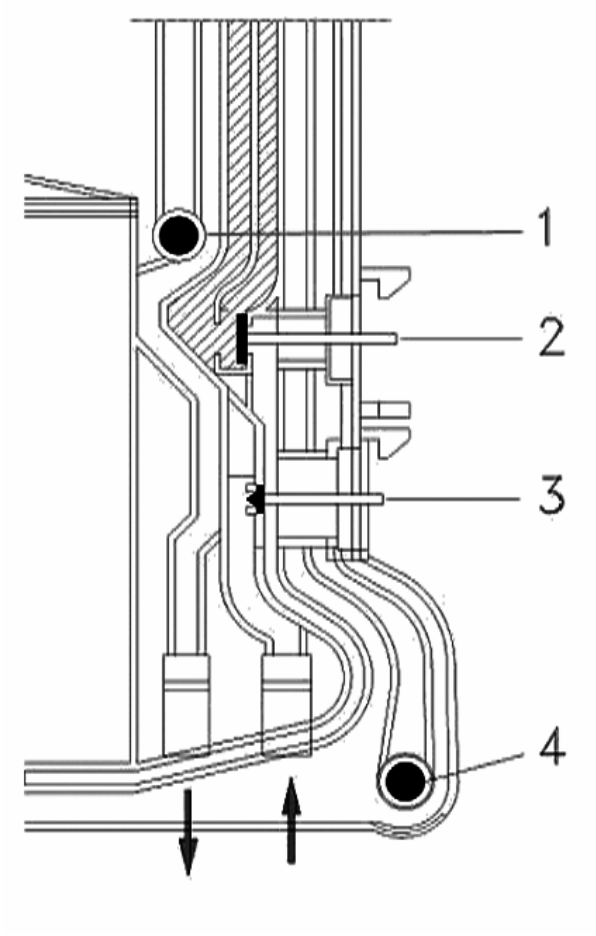
4.2.4 Water Inlet Mixer Without EGS



1. Water Outlet to Sump
2. EGS Valve not activated
3. Reactivation Valve
4. Connection to Inlet Valve

Figure 4-5: Inlet Mixer without EGS

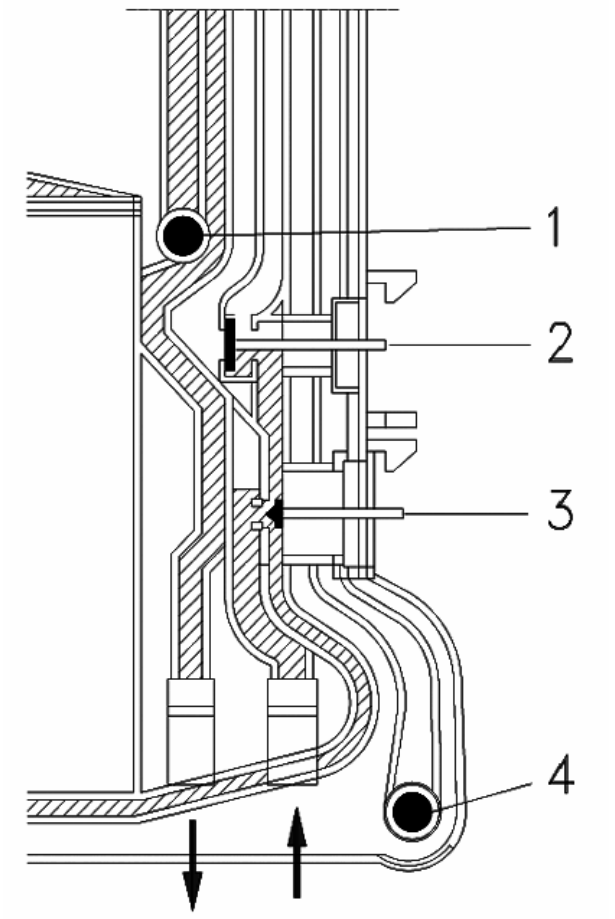
4.2.5 Water Inlet Mixer wth EGS



1. Water Outlet to Sump
2. EGS Valve activated
3. Reactivation Valve
4. Connection to Inlet Valve

Figure 4-6: Inlet Mixer with EGS

4.2.6 Water Inlet Mixer during Reactivation



1. Water Outlet to Sump
2. EGS Valve
3. Reactivation Valve open
4. Connection to Inlet Valve

Figure 4-7: Inlet Mixer during Reactivation

4.2.7 Flow Meter B3/4, Water Intake Quantity

A Flow Meter B3/4 integrated in the Water Inlet Mixer monitors the water intake quantity. The water flow is measured in the hard water area.

A permanent magnet located in the Flow Meter axle activates an external reed switch each time the axle rotates. The pulses supplied by the reed switch are registered by the electronic unit and compared with a target value stored in memory for the particular program or program step in operation. For each liter of water, approx. 200 pulses should be registered. When the target value (maximum number of pulses) is reached, the water intake step is stopped. If the target value has not been reached after 4 min, the program is interrupted and the Drain Pump operates. Then, depending on the model, the Inlet/Drain LED flashes or fault code F13 is displayed, see Fault code F13, 6.8.14.

Note
For precise details regarding permissible minimum flow pressure, see the appropriate operating/installation instructions.

4.2.8 Sensor Softener

If there is a break in data transfer between the Sensor Softener and the electronic module, the control activates an emergency program. The basis for calculating the period between individual reactivation cycles is then the most recently registered water hardness Figure saved before the break in communications. At every new program start, the electronic module attempts to re-establish contact with the Sensor Softener. If this is successful, measured values from the Sensor Softener will then be used again.

To ensure that possible measurement faults at the Sensor Softener do not have severe consequences, the electronic control includes a further safety feature. A table relating water hardness to maximum water quantities is stored in memory. If the maximum water quantity for the hardness level in question is taken in without reactivation having taken place, a reactivation cycle is started automatically.

If a sensor softener fault is registered, the fault code F87 is displayed and saved in the fault memory, see Fault code F87, 6.8.15.

4.2.9 Electronically Controlled Water Hardness (EGS)

To prevent or avoid possible glass corrosion, the wash water hardness level should not exceed or fall below 3 gr/gal, in program steps with heating and 5 gr/gal in program steps without heating. With mains water hardness below 20 gr/gal. (In heating steps under 16 gr/gal) the Solenoid Valve Y5 is activated to add a proportion of hard mains water to the cabinet. The proportion added in this way depends on the mains water hardness level set at the electronic unit or that measured at the Sensor Softener. The EGS system is not active as standard in all wash programs, but this can be programmed as an option if required.

The EGS Valve is located in the Water Inlet Mixer.

4.2.10 Intelligent Tab Function

To optimize wash results, the type of detergent (normal detergent or combination products in tablet form) used in the dishwasher can be set. To adjust the program sequence to suit the detergent type, press the Tab as appropriate. The selected function remains applicable until it is modified again. It is therefore not necessary to select 2 in 1 or 3 in 1 before every program.

Standard detergent (powder or tab form):
The tab button is not pressed. This means filling rinse aid in the customary way, and salt will be consumed for the reactivation of the water softener.

2 in 1 Detergent:
When the 2 in 1 function is selected, the program sequence is adjusted for 2 in 1 tablets (containing detergent and rinse aid). All water intake will be with soft water at the pre-set water hardness level. The dispensing of rinse aid and the rinse aid refill indicator light are deactivated.

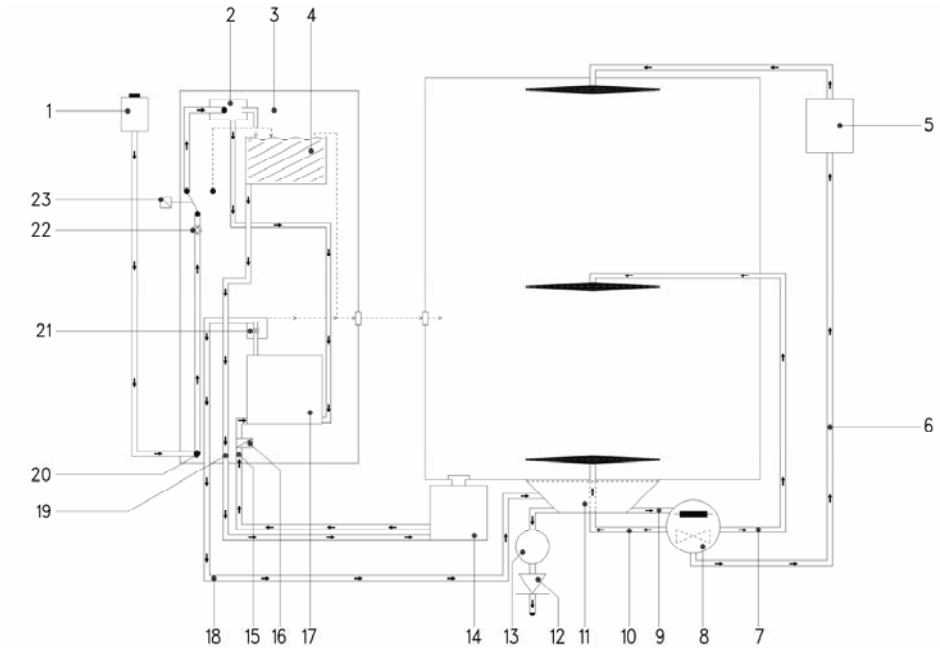
3 in 1 Detergent:
When 3 in 1 function is selected, the program sequence is adjusted for 3 in 1 tablets (containing detergent, rinse aid and salt). The dispensing of rinse aid and the rinse aid refill indicator light are deactivated. Salt consumption for the softener reactivation is reduced to between 1/3 and ¼ of its normal level. During the first two water intake cycles, prepared water taken from the water softener is added to the circulating water. During the following intake cycle, the softener is inactive.

Note
When selecting the function “2in1” or “3in1”, impulses dispense rinse aid (1 ml), to slowly empty the dispensing chamber. This is necessary since rinse aid remnants, depending on their chemical composition, can clump, or separate, under certain temperature and storage conditions.
The additional rinse aid dispensed as the chamber is being emptied has a positive effect on the drying result. So if the drying result deteriorates after some time of washing with combination products, it might be that all rinse aid remnants have been flushed from the detergent chamber.

Warning
The 3 in 1 function may not be selected if the water hardness level is above 26 gr/gal. The detergent manufacturer’s instructions must be followed.

Note
If detergent tabs are used which contain other components in addition to rinse aid and salt replacement (such as glass care, stainless steel shine, etc.), select function “3in1”.

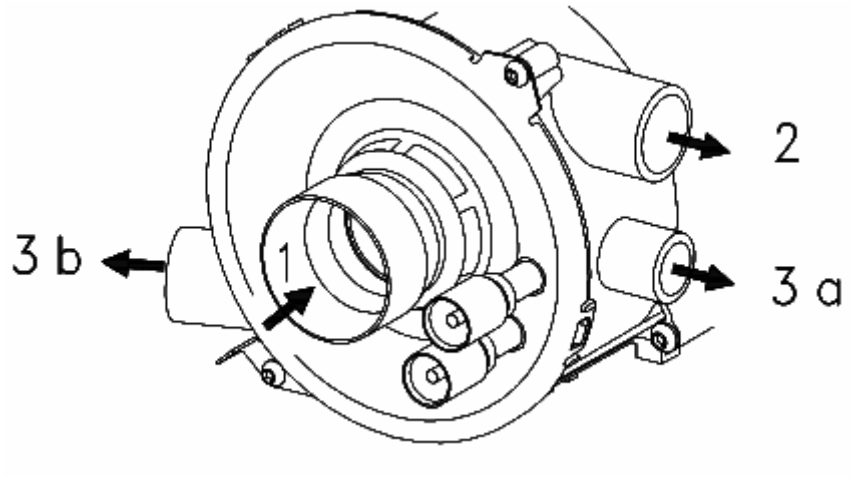
4.3 Water Circulation & Heating



1 Solenoid valve – Water Intake Y2
2 Ball Valve
3 Water Inlet Mixer
4 Water Reservoir – Softener Reactivation
5 Turbidity Sensor B3/10
6 Feed Pipe – Top Spray Arm
7 Feed Pipe – Middle Spray Arm
8 Circulation Pump M6 + Heating R1
9 Feed to Circulation Pump
10 Feed Pipe – Bottom Spray Arm
11 Sump
12 Non-return Valve
13 Drain Pump M8
14 Salt Container
15 Water Intake from Salt Container
16 Solenoid Valve – Reactivation Y38
17 Resin Tank
18 Soft Water Outlet to Sump
19 Water Outlet to Salt Container
20 Supply to Water Intake Mixer
21 Non-return Device
22 Flow Meter B3/4
23 Solenoid Valve – Wash Water Hardness Y5 (EGS)

Figure 4-8: Water Intake and Circulation Paths

4.3.1 Circulation Pump



1 Water Intake (suction area)
2 Output to Middle Spray Arm
3a Output to Top Spray Arm
3b Output to Bottom Spray Arm

Figure 4-9: Circulation Pump – Water Paths

Water is passed to the spray arms via the circulation pump. There are two circulation pump versions depending on model.

Circulation pump with slide shutter: MPEW (approx. 65 W)
With spray arm alternation, the spray arms are only intermittently supplied with water. This is achieved via a slide shutter, which is moved back and forth as appropriate to open or close water paths to the different spray arms. For 30 sec. both the top and bottom spray arms are supplied and during the next 30 sec. the middle spray arm only. The total water circulation rate is constant and is approx. 34 l/min. Detergent is only dispensed when the middle spray arm is being supplied with water.

A hall sensor is located between the pump housing and the motor to measure the pump speed. Depending on the measured value, the quantity of additional water required, if any, can be established.

Circulation pump without slide shutter: MPEH (approx. 85 W)
With the circulation pump without the slide shutter, all three spray arms are supplied with water at the same time. The total water circulation rate is approx. 68 l/min. Approx. 15 l/min flow through the top spray arm, approx. 34 l/min through the middle spray arm and approx. 19 l/min through the bottom spray arm. This pump version does not have a speed sensor.

Both pumps are equipped with a winding changeover, which increases the torque at the moment they are switched on (higher starting torque). In this state the main winding is connected directly, and the auxiliary winding connected indirectly via the capacitor, to the power supply.

The winding changes are made via a changeover relay on the electronic module. At every switch-on, the changeover relay and the circulation pump-starting relay are supplied with power at the same time. The changeover relay switches the windings with a time delay.

Both circulation pumps have thermal winding protection.

4.3.2 Circulation Pump - Speed Sensor and Load Sensing

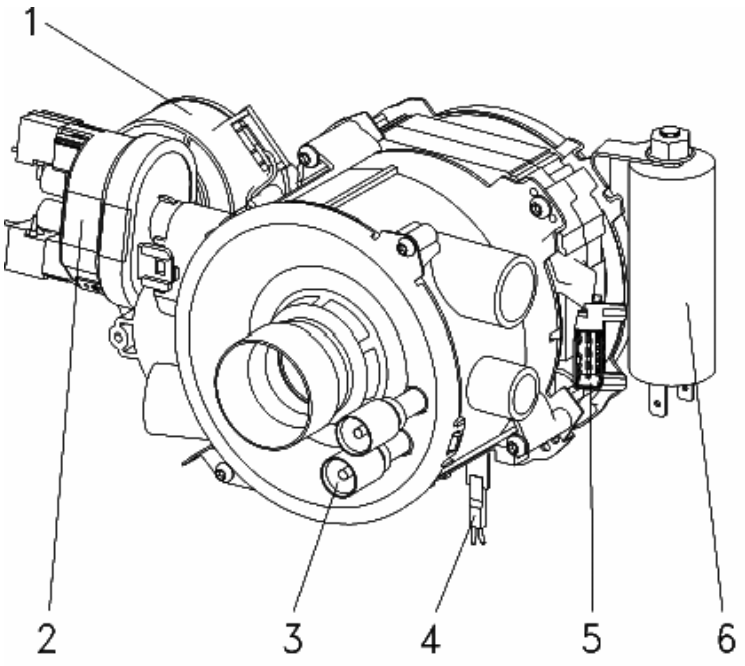
G1570 SC VI, G2570 SC VI G2630 SCI, G2670 SCVI, G2830 SCI

The MPEW circulation pump (with slide shutter) is fitted with a speed sensor (Hall Sensor), which is located between the pump housing and motor. The pump speed can be measured via the sensor and a ring magnet mounted on the circulation pump shaft.

The quantity of water taken in at the start of the program is measured via the flow meter, B3/4. This basic quantity of water wets the load and settles in certain areas such as on the bottom of cups. The lower the quantity of water that flows back into the sump, the greater the quantity of dishes in the appliance, as more water has been required to wet the load. The way the circulation pump is running is used to register how much water has flowed back to the sump. If sufficient water has returned, the pump runs evenly. With too little water, the pump speed fluctuates. Using this feature, additional small quantities of water are taken in until a stable motor speed is registered.

By monitoring the speed in this way and thus controlling additional water intake precisely can reduce energy and water consumption. The potential savings are approx. 15% water and 19% energy.

Note
This system has an additional advantage. Good wash results are also ensured if the dishwasher load includes items with less than ideal shape (e.g. cups with deep bases) as the controlled additional water intake will replace the water that may be trapped in such pieces. This similarly applies if, e.g., a light plastic bowl should be turned over and filled inadvertently by the stream of water.



1 Slide Shutter Motor
2 Heater Pressure Switch
3 Heating Elements
4 Speed Sensor (Load Sensor)
5 Motor Connection
6 Capacitor

Figure 4-10: Circulation Pump - Components

4.3.3 Heating

A ring heater element in the circulation pump housing heats the water. The heater element and circulation pump together form one component. This ensures that on models with spray arm alternation, heating can always be carried out whichever water path is currently being used.

Integrating the heater element in the pump housing also ensures that it is always cooled sufficiently thus preventing the baking-on of soil particles or impurities in the water.

Various safety measures protect the heater element against overheating, such as the following:

Heater Pressure Switch
NTC Temperature Sensor
Electronic Control

The heater is only activated when the circulation pump has taken in sufficient water.

4.3.4 NTC Temperature Sensor, R30

An NTC sensor is fitted in the sump and monitors water temperatures during dishwashing.

If the maximum safety temperature of 194° F at the NTC sensor is exceeded, the program is interrupted (boiling prevention) and fault code F26 is registered, see Fault code F26, 6.8.15.

If during heating the desired temperature is not reached in the given time, a fault is registered, see F25, 6.8.12.

If the sensor or its connections are open- or short-circuited, the heating is switched off. The program then continues to the end without heating or dispensing, see Fault code F01, (NTC short-circuited), 6.3.12 or Fault code F02, 6.8.12.

NTC Sensor Resistance Values	
Temperature (° F)	**Resistance (kΩ)**
32	35.979
41	28.519
50	22.766
59	18.281
68	14.774
77	11.982
86	9.787
95	8.048
104	6.653
113	5.523
122	4.608
131	3.856
140	3.243
149	2.745
158	2.333
167	1.990
176	1.704
185	1.464
194	1.262
199	1.157
203	1.093

Table 4-1: NTC Sensor Resistance Values

4.3.5 Heater Pressure Switch, B1/13

The heater pressure switch B1/13 is located directly on the circulation pump and registers the water pressure when the pump is in operation.

Using the pressure switch contacts, the heating is controlled via 2 poles. The heating is switched via a heating relay located before the pressure switch contacts in the circuit. Heating activation occurs during the wash and final rinse cycles.

If the circulation pump and heating relay are activated and the heater pressure switch reset contact is open, the control registers a water intake fault, see Fault code F14, 6.8.15.

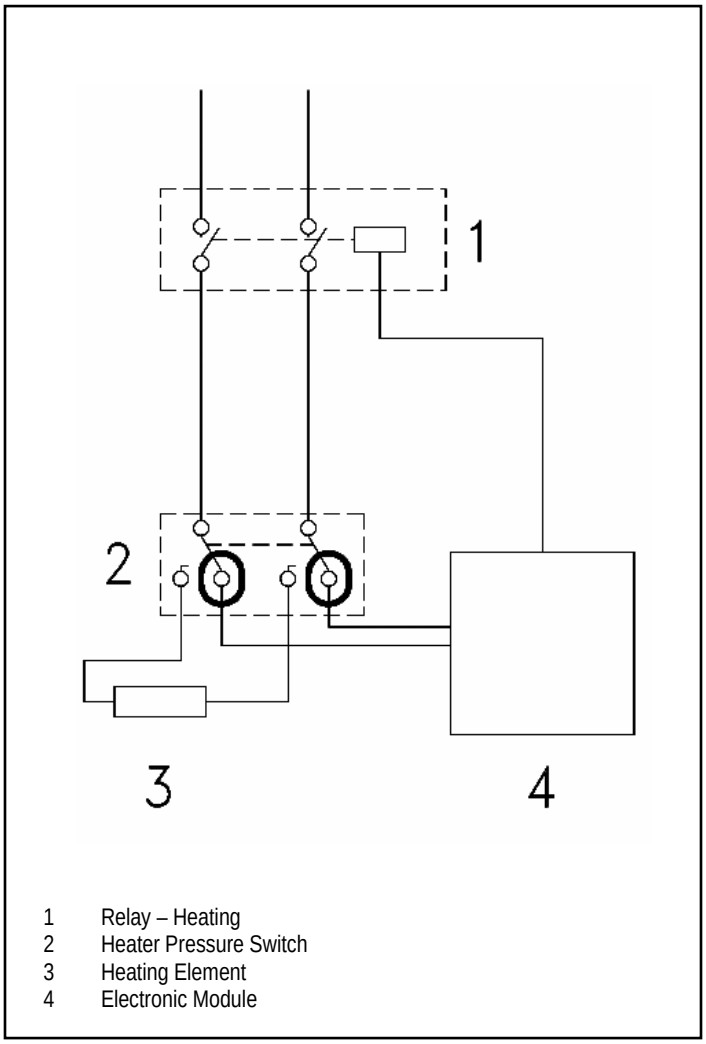


Figure 4-11: Heater Pressure Switch Circuit

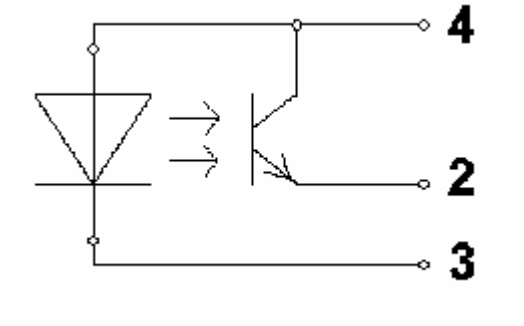
4.3.6 Turbidity Sensor (ECO Sensor III, Auto-sensor), B3/10

Dishwashers from the G 1000/G 2000 generation are provided with one of two turbidity sensors, depending on model:

The ECO sensor III measures the turbidity of the water and based on this result, the wash blocks, temperatures and running times of automatic programs are modified. In addition to this, the Auto-sensor has a microprocessor to evaluate the particle measurement.

Principle of Operation
Water circulation and the presence of detergent cause bubbles to develop and measurement technology cannot differentiate between such bubbles and suspended soil particles. With the ECO sensor a proportion of the suds is directed into a bypass channel, which is wider at the other end. This causes the flow rate to reduce and hence the bubbles in the water to rise. The suspended soil particles in the water can then be more accurately registered in the following measuring process.

A photoelectric barrier switch (IR diode (infrared) opposite a photo transistor) acts as a turbidity sensor. Depending on the turbidity (Transparency) of the water, a certain current flows through the phototransistor. This current is measured and processed by the electronic unit, which then initiates the appropriate action. If the level of turbidity passes certain thresholds, then depending on the soiling detected, the following cleaning cycles are modified accordingly with regard to water quantity, program duration and temperature.



1 Common 5 V
2 IR LED Cathode
3 Light Receiver Output (Emitter

Figure 4-12: Turbidity Sensor Circuit

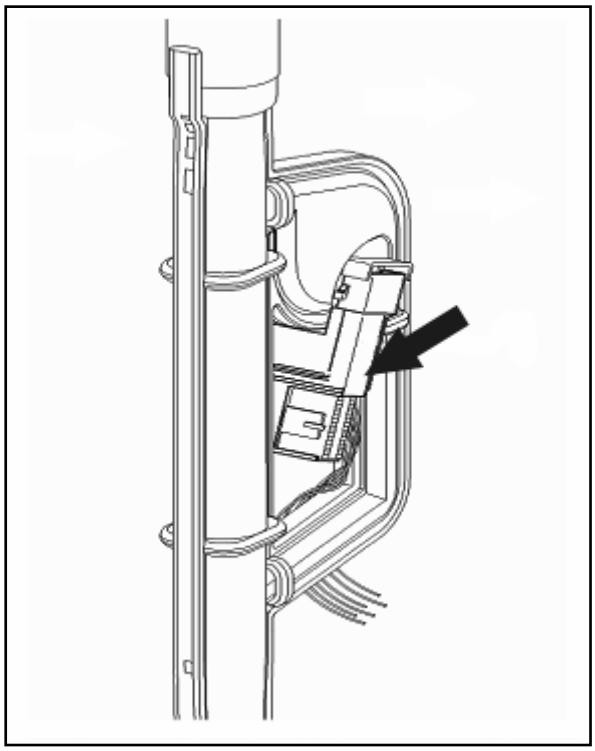


Figure 4-13: Turbidity Sensor

The sensor is situated in the feed pipe to the top spray arm, as shown in Figure 4-13.

The flow rate is approx. 15 l/min. In order to compensate for residues on the sensor and ageing of the optical system, the turbidity sensor must be recalibrated regularly. This process is carried out automatically by the electronic unit and cannot be modified in any way. Measurements are carried out at different times during the pre-wash, main wash and interim rinse stages. For this, the top and bottom spray arms must be supplied with water.

4.3.7 Spray Arm Sensing

Specific model dishwashers are equipped with a spray arm sensing system to alert the operator that the spray arm is obstructed by a large dish, or utensil etc....

A spray arm sensor(s) is / are fitted on the water intake to monitor the middle and / or lower spray arm(s) as shown in Figure 4-14. A small magnet is fitted on one end of the appropriate spray arm.

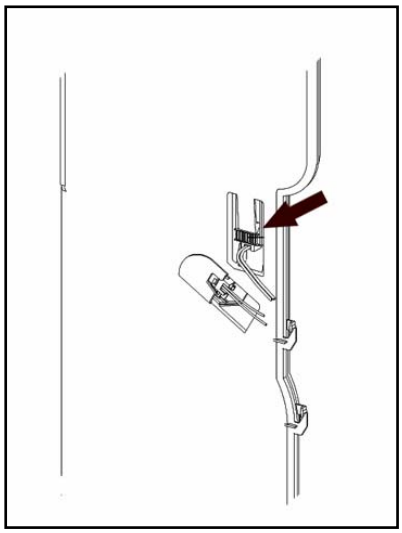


Figure 4-14: Spray Arm Sensor

The spray arm sensor is only monitored during a program in operation when the circulation pump is activated.

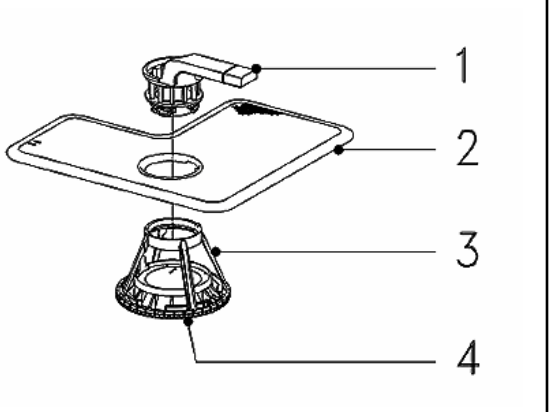
The time period during which the spray arms are monitored is given by the electronic control. If a fault is detected, it will be indicated but not saved in the fault memory. The indication will be cancelled when the fault is remedied.

The minimum spray arm speed is approx. 5 rpm. Therefore approx. 12 sec. after the start of the monitoring time, the next pulse should be registered.

The maximum spray arm speed is approx. 50rpm. Therefore after the start of the monitoring time, the next pulse can only be registered at the earliest approx. 1.2 sec. later.

If a fault is indicated, the indication will remain active even after the door has been opened. To cancel the fault indication, the door must be closed again.

4.3.8 Filter Combination with Micro Fine Filter



1 Crown Coarse Filter
2 Large Surface Area Fine Filter
3 Micro Fine Filter
4 Filter Cap

Figure 4-15: Filter Combination in Sump

The circulation pump M6 pumps the wash water from the sump via the filter combination to the spray arms. The circulating wash water is filtered via 2 parallel paths. A proportion of the water flows through the central opening of the crown coarse filter and then passes through the conical micro fine filter; see Figure 4-15, Item 3. The remainder passes directly through the large surface area fine filter; see Figure 4-15, Item 2, which has a small additional hole to provide a vent for the circulation pump intake area. All water is then mixed together again in the sump where it is taken in by the circulation pump and the circuit is repeated. In this way some of the water passing through the filter system always passes through the micro fine filter so the proportion of soil particles in the suds is continually being reduced. Soil that is retained by the micro fine filter either collects there or falls onto the filter cap where it will eventually be removed by the drain pump.

The crown coarse filter, see Figure 4-15, Item 1, is attached to the filter combination handle. If dispensed powder detergent should fall into the micro fine filter, it remains on the filter cap where it can dissolve, instead of collecting in the drain outlet. Foreign bodies, which pass the crown coarse filter to the micro fine filter collect on the filter cap and so cannot block the drain outlet.

4.4 Dispensing

4.4.1 Combination Dispenser

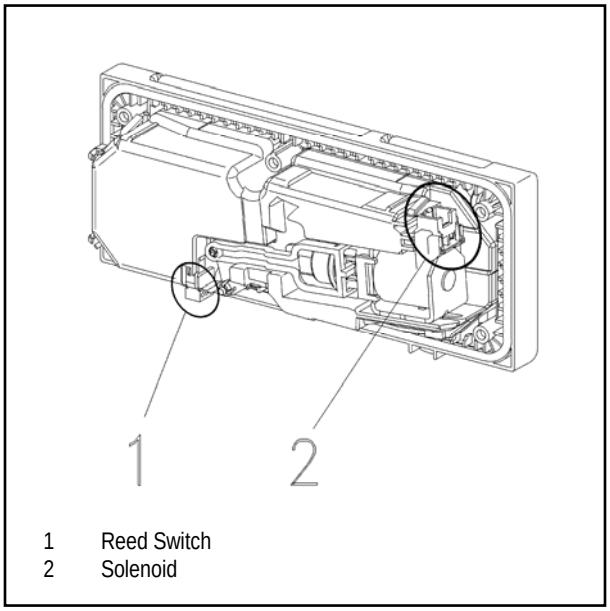


Figure 4-16: Combination Dispenser

The dispenser contains a solenoid that is activated via pulses to dispense detergent and rinse aid. The first pulse opens the detergent dispenser flap. All following pulses then dispense rinse aid.

During detergent dispensing the solenoid is activated by a brief pulse, and this opens the detergent dispenser flap.

Rinse aid is dispensed in pulses. Each solenoid impulse dispenses approx. 1 ml rinse aid into the cabinet interior. 3 solenoid pulses are therefore required to dispense the normal quantity of rinse aid of 3 ml per wash. Each pulse is applied for approx. 10 sec. so that there is sufficient time for the rinse aid to flow into the cabinet. The pause between individual pulses is also approx. 10 sec.

If the rinse aid container is empty, a reed switch is activated and this lights up an LED in the control panel or display. The rinse aid container has a capacity of 110 ml.

4.5 Drain System

4.5.1 Drain Pump

The drain pump M8 is driven by a synchronous motor and located under the cabinet on the left next to the sump. It is directly activated by the electronic module. In case of fault, the drain pump M8 is also activated directly via the overflow float switch B8/3. The drain pump pumps the suds via the non-return valve and the drain hose to the on-site drain.

During drainage the drain pump M8 extracts water from below the microfine filter. This reverses the direction of flow through the microfine filter that normally exists during the cleaning and rinse cycles. Soil particles that have been trapped in the filter during dishwashing are then flushed out with the drain water.

Pumping limits:
Max. 13’ hose length
Max. 3’ 3” head height

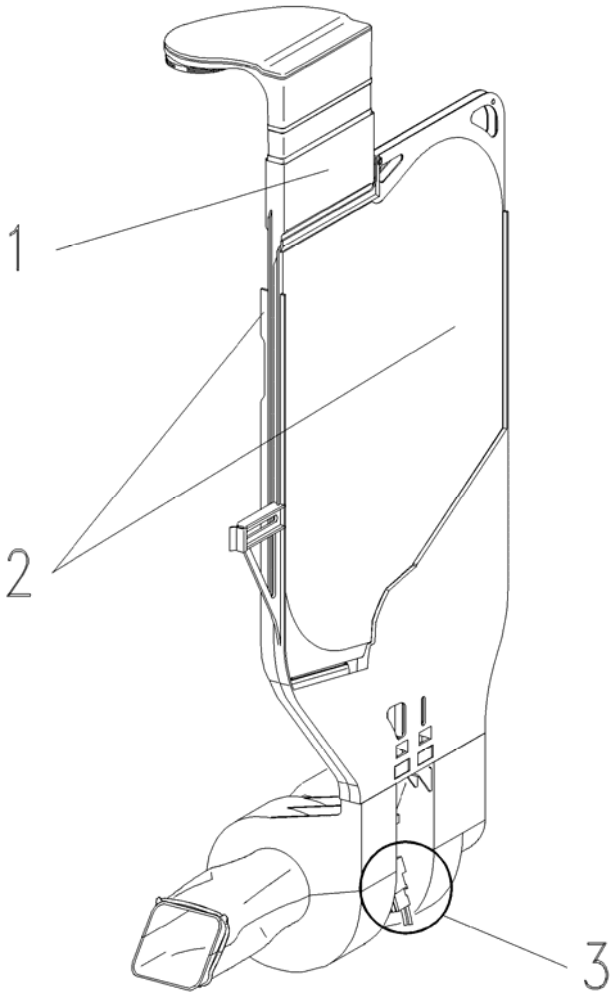
Most faults will cause the program in operation to be interrupted and the drain pump to start.

If the WaterProof System has been activated, Fault code F70, 6.8.15, the drain pump continues to operate even after the appliance has been switched off. In this case, the pump is only switched off when the power source is disconnected.

4.6 Drying

Depending on model and production time frame, the G1xxx/G2xxx series dishwashers are outlined below:

4.6.1 Circulation Turbothermic Drying (active): UTT Version 1



1 Inner Fan Channel
2 Outer Fan Channel
3 Fan

Figure 4-17: Drying System UTT Version 1

Circulation Turbothermic drying (UTT) operates with two separate air paths:

Condensing Circuit
To get dishes dry, moisture has to be removed from the dishwasher cabinet. The moist, warm air in the cabinet is gradually cooled. Cold air can hold less moisture than warm air, and thus, in this cooling process condensation drops form, which settle in the coldest areas of this circuit. To remove moisture from the air in the dishwasher cabinet, the air is sucked in above the cutlery tray (right front) and channeled into a condensing pocket. This condensing pocket is located in the right outer wall of the dishwasher with cool ambient air circulating around it, which results in a faster cooling of the moist, warm air in the dishwasher cabinet. To enhance the heat dissipation, the side panels are made of a thin (0.1 mm) stainless steel foil. The de-humidified air and the condensation go back into the dishwasher cabinet via the round opening at the side. The condensation (maximum ½ water glass) collects in the sump, and the air continues circulating. At the end of the program, the condensation is drained off.

Cooling Circuit With Ambient Air
To cool off the warm air in the cabinet, cold or cooler air is needed. To this end, ambient air is sucked in at the front bottom area and channeled past the sides of the condenser. These are the areas between condenser and the outside wall of the dishwasher, and between the condenser and the dishwasher cabinet wall. The air is then passed back into the room at the top rear wall. The effect is an efficient heat transfer, turning the warm air into cooler air and removing more and more moisture from the air in the cabinet, thereby drying the dishes effectively.

The clear separation of ambient air and dishwasher cabinet air has the following advantages:

Independent of the type of water connection (cold or hot water) a good drying result is achieved.

By clearly separating the condensation and cooling circuit, air discharge at the front panel is eliminated. The inside air remains completely inside the dishwasher cabinet.

4.6.2 Circulation Turbothermic Drying (active): UTT Version 2

Note
This system is installed in models Gx04x – Gx47x starting with production index 34/…

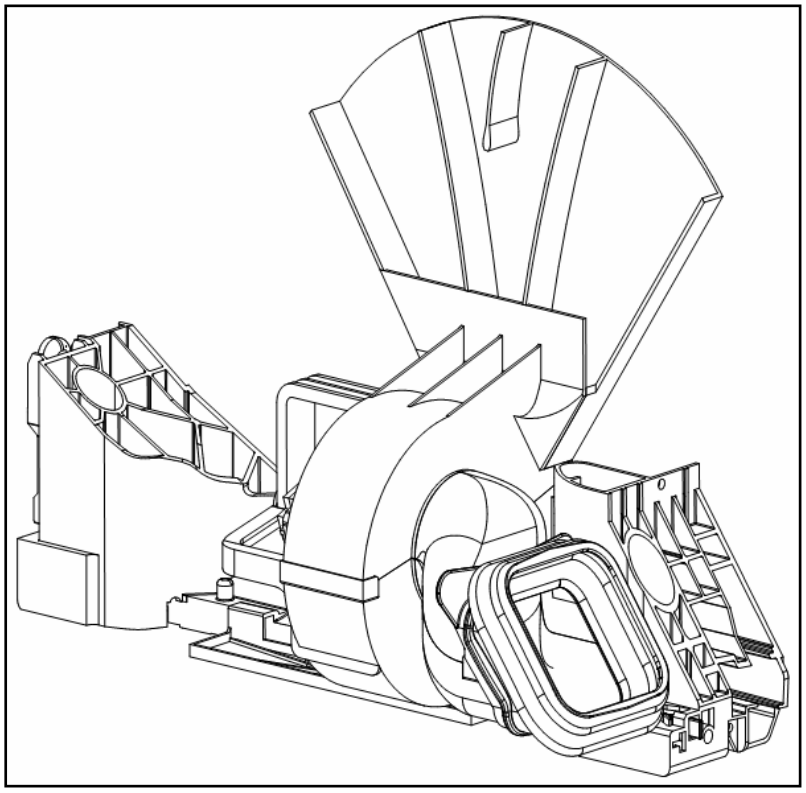


Figure 4-18: Drying System UTT Version 2

The function of both versions of circulation Turbothermic drying is comparable. However, Version 2 has no condenser pocket. Therefore the dishwashing cabinet is completely closed – the openings, to which the condenser pocket is attached in Version 1, are eliminated.

As a result, the entire area of the right side panel is cooled by the fan. The moist, warm cabinet air settles in the coldest areas of the cooling circuit and condenses on the cool cabinet inside wall. Moisture is removed from the cabinet, and the dishes dry through the residual heat. The condensation runs down the cabinet inside wall to the sump and is pumped off at the end of the program.

4.6.3 Fan

Two different fan types are employed for the two different versions of circulation Turbothermic drying:

Circulation Turbothermic drying (active): UTT Version 1
A split-pole motor (approx. 23 W) drives two impellers. One impeller directs cool air across the outer surface of the stainless-steel condensation surface foils. The second impeller transports steam from the cabinet to the condensation surfaces.

Circulation Turbothermic drying (active): UTT Version 2
A split-pole motor (approx. 19 W) drives an impeller, which transports cool air to the outer surface of the right side panel.

5.0 Service and Maintenance

5.1 Housing

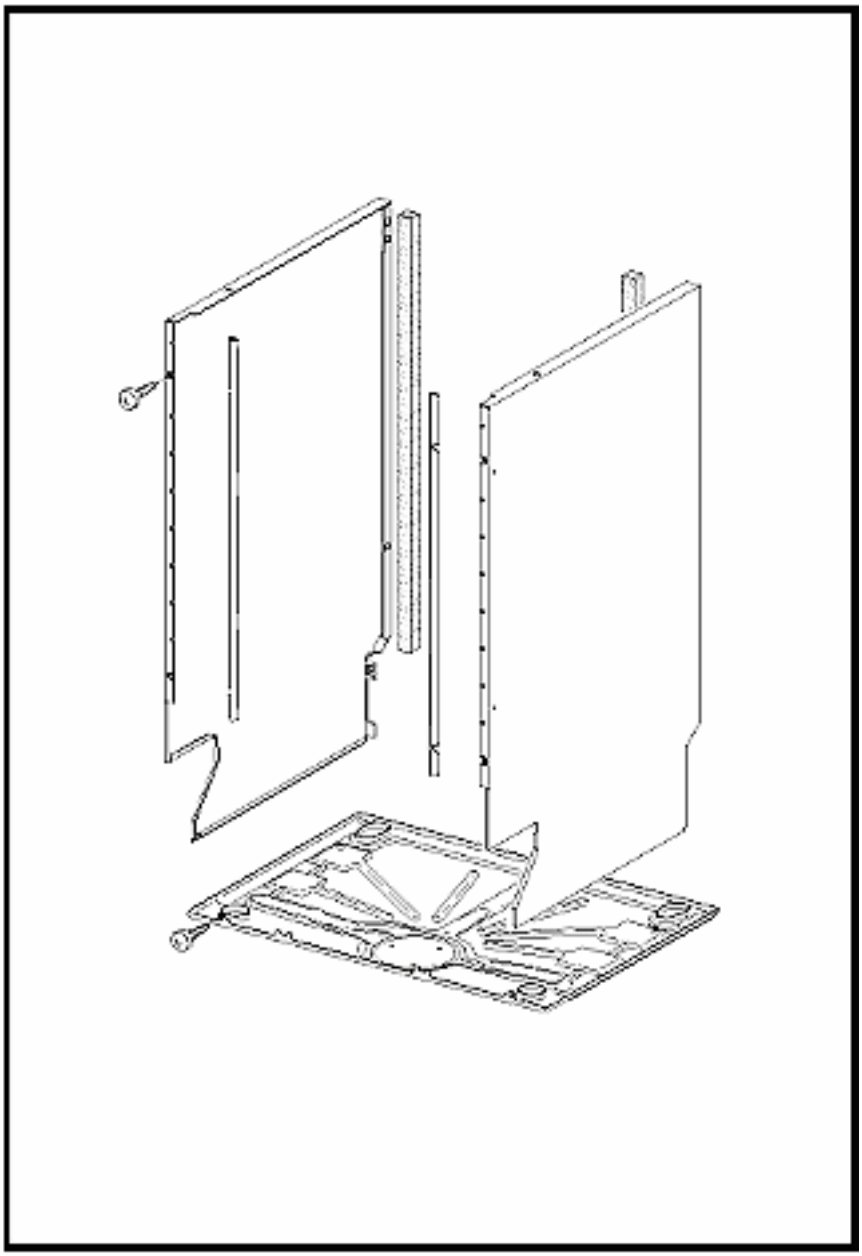


Figure 5-1: Appliance Housing

5.1.1 Side Panel – Removal

1. Refer to Figure 5-2.
2. Remove the three retaining screws - Item 1.
3. Use needle nose pliers to press in the retainer on the corner tabs.
4. Remove the side panel.

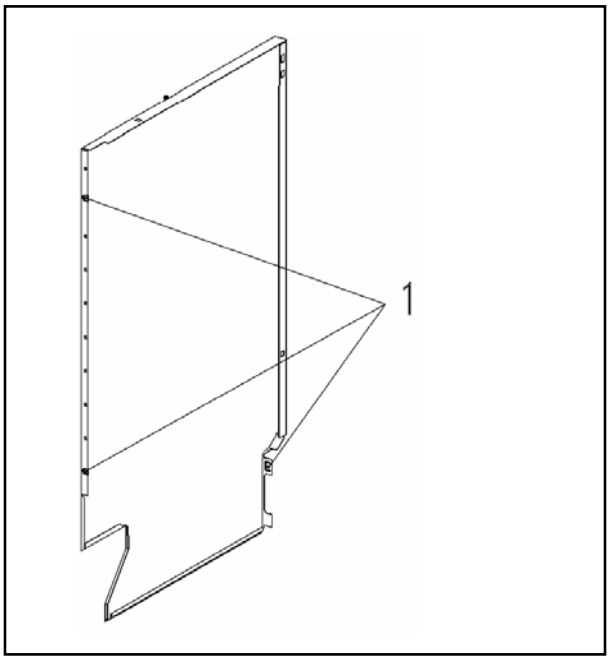


Figure 5-2: Side Panel Removal

5.1.2 Drip Pan – Removal

Warning
Before tilting the machine onto its back, the following must be carried out:

1. Open the salt container cap briefly then close it firmly - to empty the water inlet mixer.
2. Pump water out of the cabinet.
3. Lay the dishwasher on its back.
4. Refer to Figure 5-3.
5. Remove the retaining screws - Item 1.

Warning
Ensure that the intake and drain hoses are not crushed.

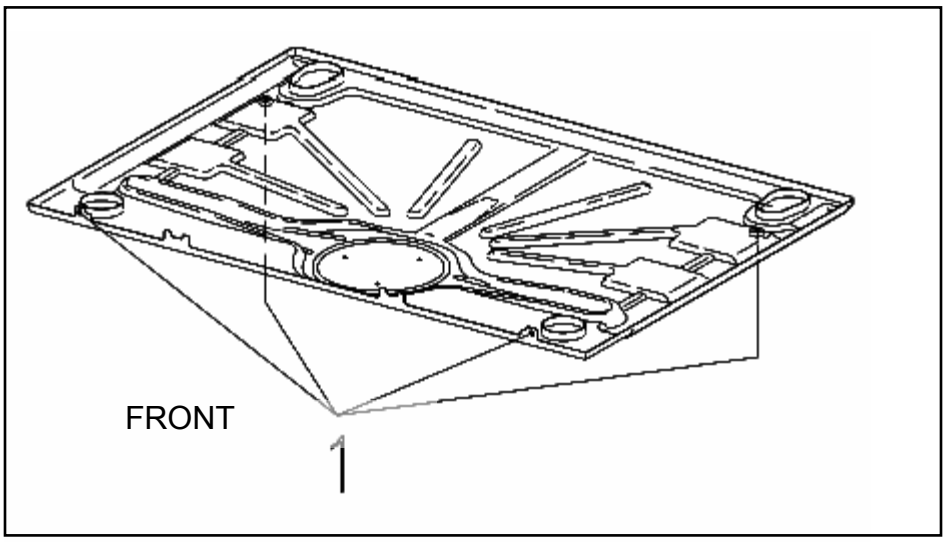


Figure 5-3: Drip Pan Removal

Important
To ensure a proper ground connection, the screws with the serrated surface under their heads MUST be used to secure the drip pan to the connection strip.

5.2 Door

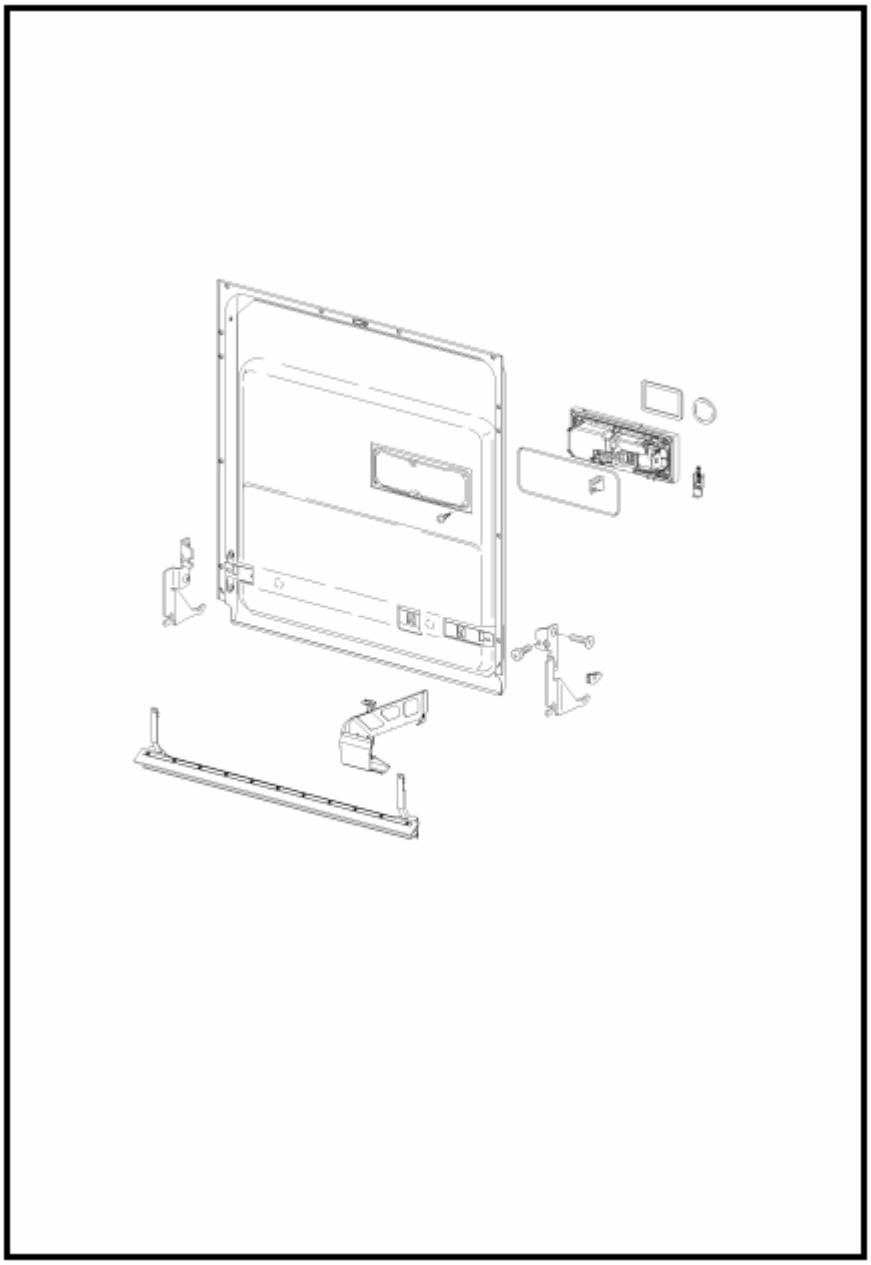


Figure 5-4: Door Panel

5.2.1 Front Panel (GDU / Custom) – Removal

1. Remove the screw caps from the side of the door (2 each side).
2. Support the panel while loosening the 4 screws, Figure 5-5.
3. Lift / remove the panel from the appliance.

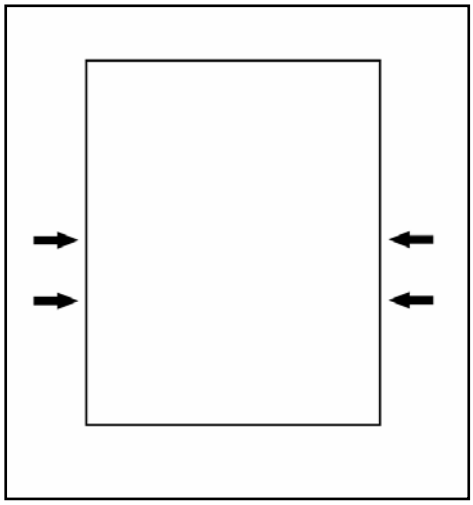


Figure 5-5: Integrated Door Panel Screw Locations

Important
Loosen the screws – Do NOT completely remove them. During reassembly do NOT over tighten the screws.

5.2.2 Door Tension – Adjustment

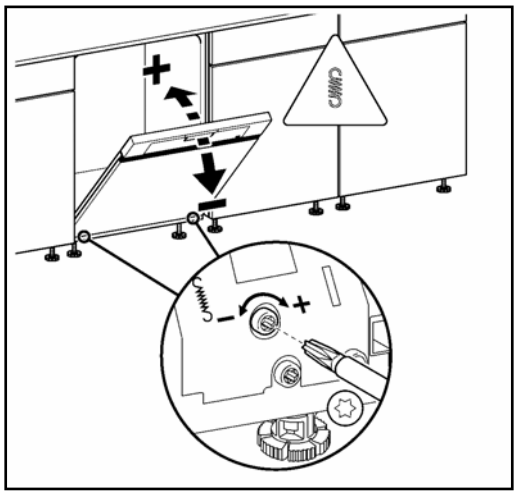


Figure 5-6: Door Tension Adjustment

Note
The front door must be completely assembled before performing the door adjustment. This includes the installation of the GDU panel or custom panel.

1. Remove the Toe Kick.
2. Refer to Figure 5-6.
3. Open the door about halfway.
4. Use a Torx T20 driver to adjust the tension.

Important
The door tension should be adjusted so the door stays where it is placed. It should NOT spring open; or require a loaded basket be kept in place to prevent it from closing.

5.2.3 Outer Door Panel – Removal

Caution
Support the outer panel while removing the retaining screws.

1. Remove the front panel (5.2.1).
2. Refer to Figure 5-7.
3. Open the door and remove the countersunk screws (Item 1) from the perimeter of the door.
4. Close the door and remove the door outer panel.

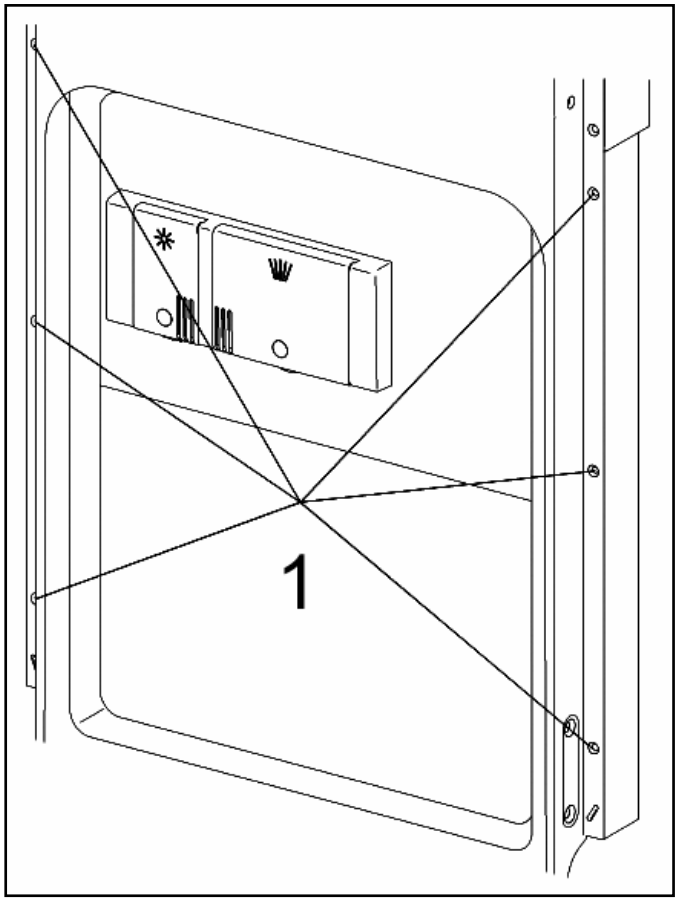


Figure 5-7: Outer Door Panel Removal

Note (Integrated Models)
When fitting the door outer panel, make sure that the cutouts in the door outer panel are correctly located in the holding plate.

5.2.4 Fascia Panel Removal

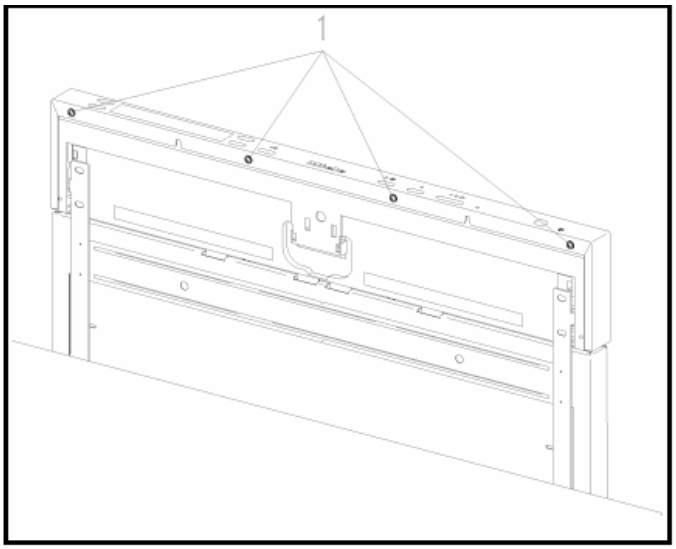


Figure 5-8: Door Fascia Panel

1. Remove the retaining screws, Fig. 5-8, Item 1.
2. Slide the fascia panel upwards.

Note
When refitting, care must be taken with the following:

- The fascia must be fitted before the switch buttons are refitted.
- To secure the fascia panel, only short screws (countersunk self-tapping 3.9 x 14) may be used as otherwise the electronic unit holder could be damaged.

5.2.5 Door Hinge - Removal

Note
Door hinges must be replaced in pairs.

1. Remove the outer door panel (5.2.3).
2. Remove the right and left side panels (5.1.1).
3. Close the door.
4. Relax the tension in the ropes of the tension springs.
5. Refer to Figure 5-9.
6. Disconnect the ropes from the tension springs - Item 1 (Use special tool Miele Mat. # 05054690 to decrease tension to spring).
7. Open the hinge by bending it upward - Item 2.
8. Disconnect the ground cable.
9. Remove the cable.
10. Unhinge the door and place it onto pad.
11. Remove the seal at door.

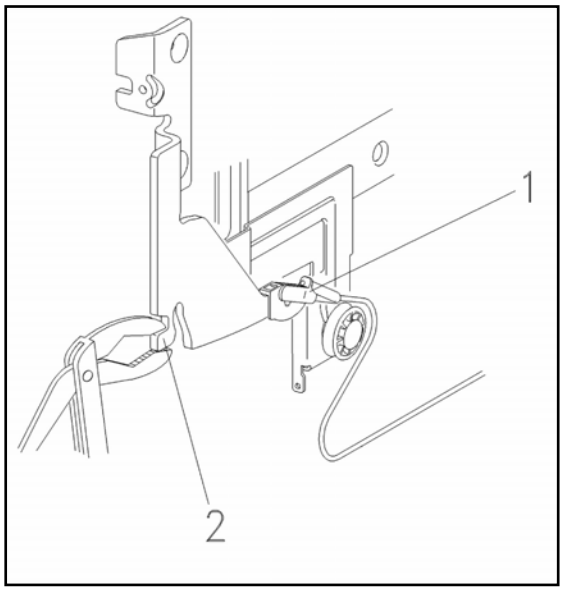


Figure 5-9: Opening the Hinge Bracket

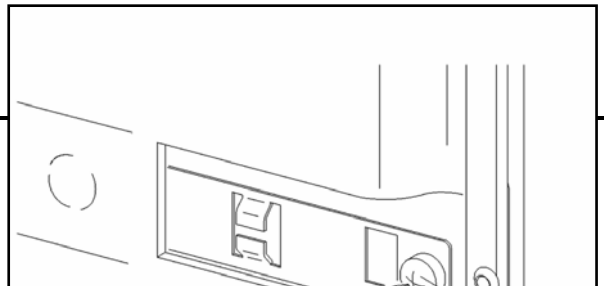


Figure 5-10: Front Hinge Retaining Screw

12. Remove the front door hinge retaining screws (Figure 5-10 - Item 1).
13. Remove the side door hinge retaining screws (Figure 5-11 - Item 1).

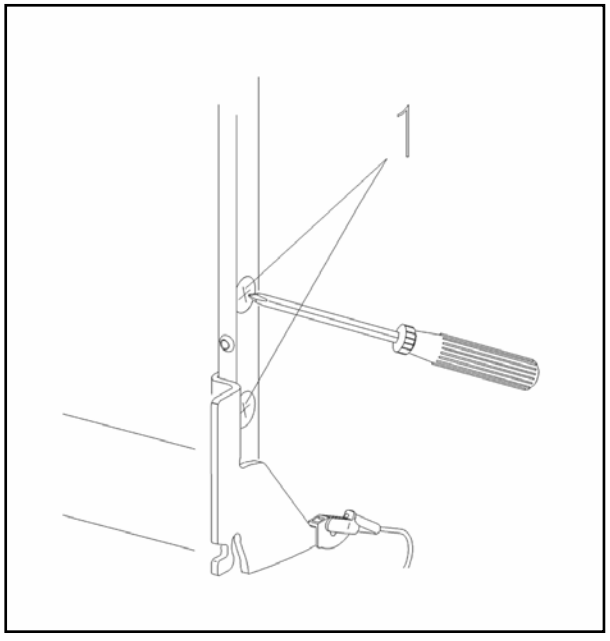


Figure 5-11: Side Hinge Retaining Screw

5.2.6 Combination Dispenser Unit - Removal

1. Remove the outer door panel (5.2.3).
2. Disconnect the connections from the dispenser
3. Remove the retaining screws (Figure 5-12, Item 1).
4. Release the retaining clips (2 on top & 1 on bottom) and press out the dispenser unit.
5. Ensure the new dispenser functions correctly using the service mode.

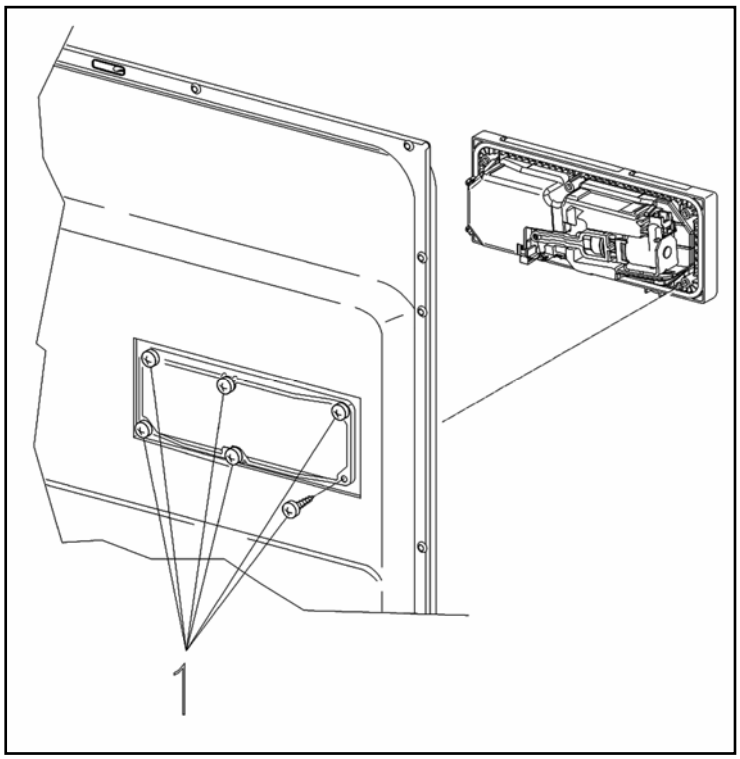


Figure 5-12: Dispenser Removal

5.2.7 Cable Holder - Removal

1. Remove the outer door panel (5.2.3).
2. Open the cable holder cover with a screwdriver.
3. Disconnect the ground connection to the door.
4. Loosen the clip.
5. Remove the cable holder.

5.2.8 Bottom Door Seal - Removal

1. Remove the cable holder (5.2.7).
2. Remove the door seal.

Note
When fitting the door seal, make sure that the seal holder is fitted back in the double U shape of the door inner panel.

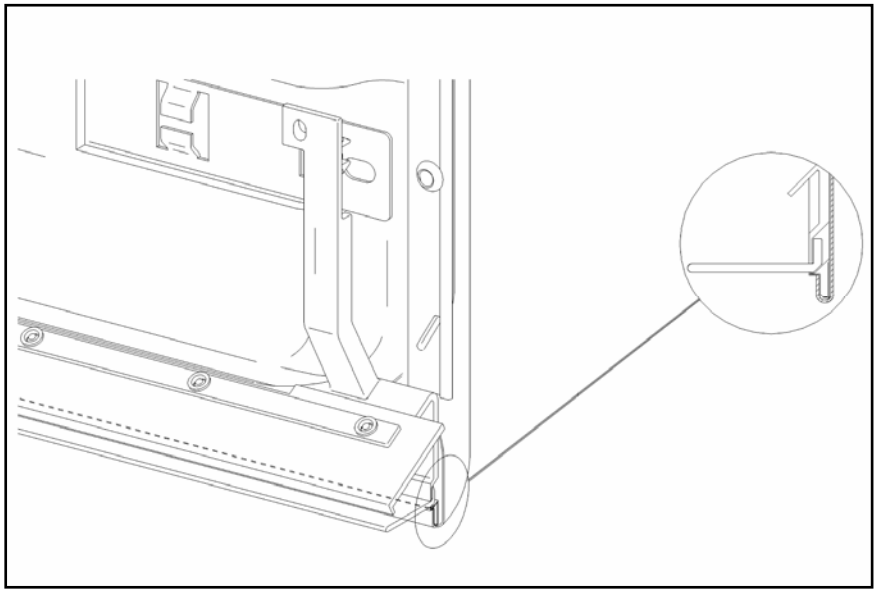


Figure 5-13: Lower door seal holder

5.2.9 Locking Plate - Adjustment

Note
Ensure the appliance is perfectly level.

1. Open the door.
2. Loosen the flat round screw.
3. Adjust the locking plate – as necessary.
4. Tighten the screw.

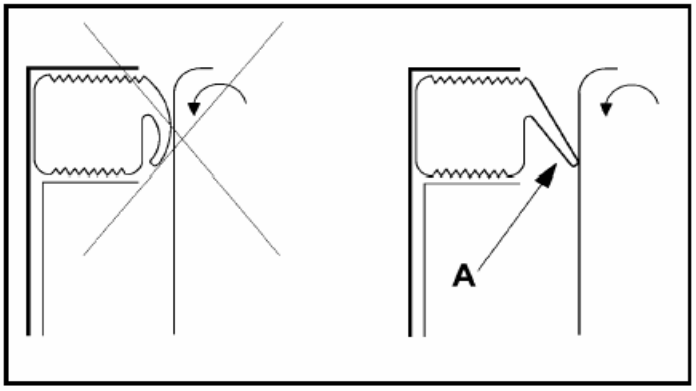


Figure 5-14: Door Seal with Door

Note
Adjust the locking plate such that the door seal is not excessively crushed and not under excess pressure when the door is closed (see Figure 5-14, Item A). The locking plate can be adjusted by 1 mm in either direction.

5.2.10 Door Lock – Removal (Integrate Models)

1. Remove the outer door panel (5.2.3).
2. Remove the retaining screw, Figure 5-15 - Item 1.
3. Press down the retaining lugs with a screwdriver, Figure 5-15 - Item 2.
4. Pull the door lock slightly to the front.
5. Remove the side screws from the inner door panel.
6. Remove the holding plate.
7. Remove the door lock from the holding plate.
8. Disconnect all plugs.

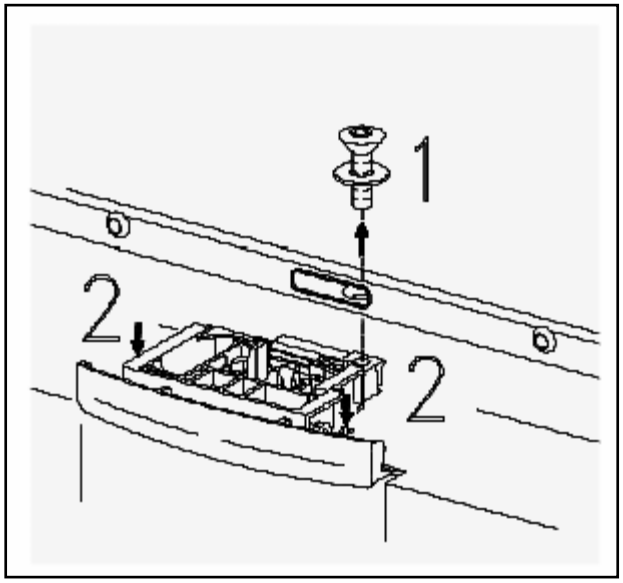


Figure 5-15: Door Lock Removal

Note
During reassembly ensure that the protective shield:

- Is NOT pushed to one side or torn.
- The tab is positioned between the holding plate and door lock.
- Is positioned under the plug area.

Important
Ensure the sealing ring under the door lock retaining screw is reinstalled.

5.2.11 Door Switch – Replacement (Integrated models)

1. Remove the door lock (5.2.10).

2. Bend the retaining lug on the switch to the side.
3. Replace the switch.

5.2.12 Fully Integrated (VI) Lock with Door Contact Switch Removal

1. Door outer panel removal (5.2.3).
2. Fascia panel removal (5.2.4).
3. Remove the screws from the sides of the door inner panel.
4. Remove the lock retaining screw.
5. Remove the holder with electronic unit.
6. Remove the lock with door contact switch.
7. Disconnect the door contact switch plug connections.

5.2.13 Door lock emergency release – Activate (Fully Integrated)

1. Remove outer door panel (5.2.3).

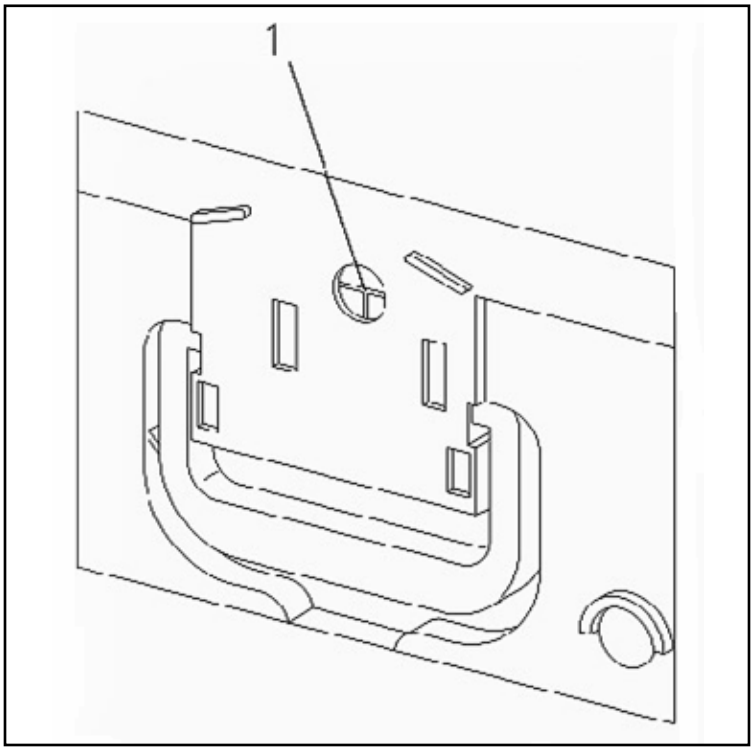
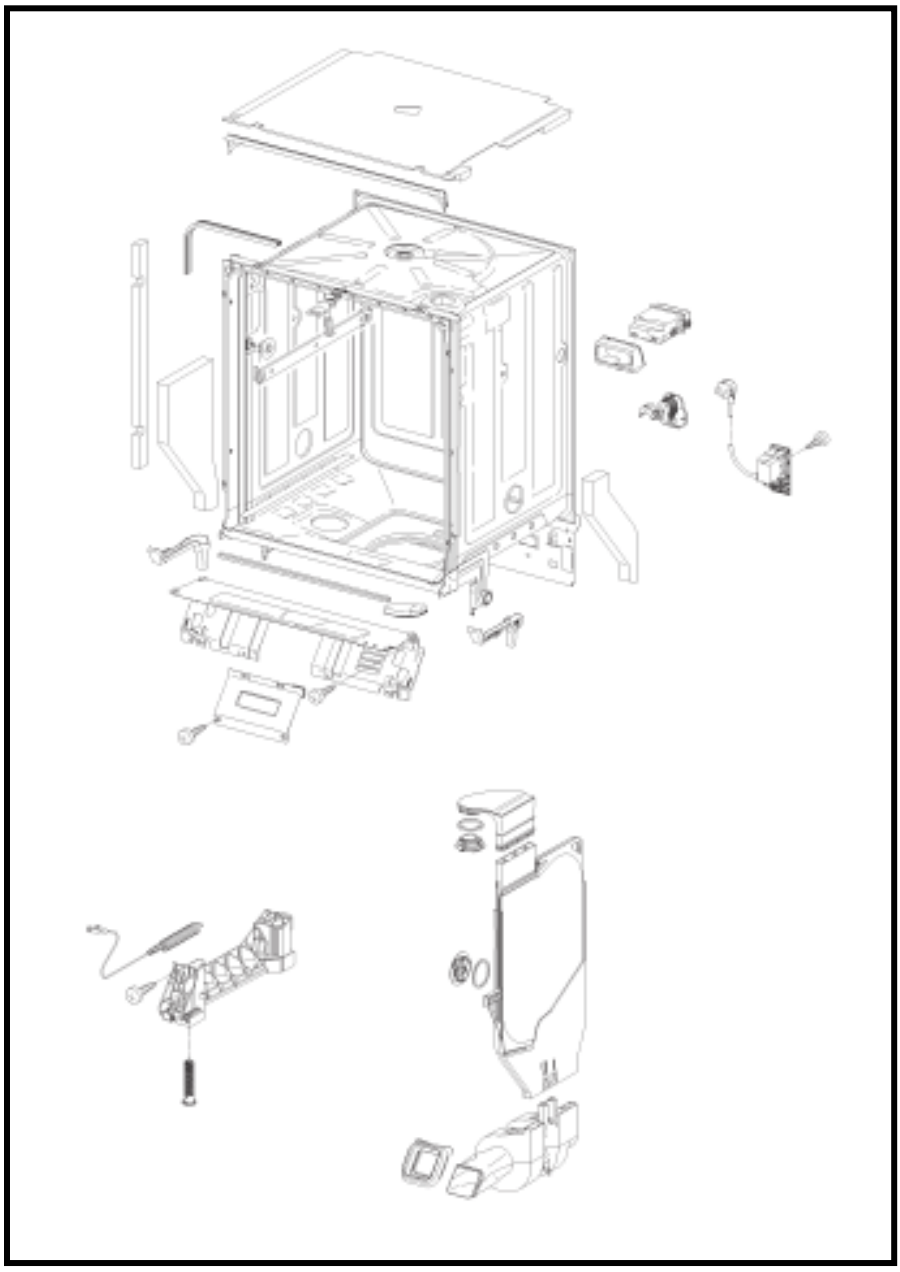


Figure 5-16: Door lock emergency release.

2. To return the locking latch into the right position, push on the emergency release with a screwdriver, see figure 5-16, Pos.1.

5.3 Inner Cabinet



5.3.1 Door Seal - Replacement

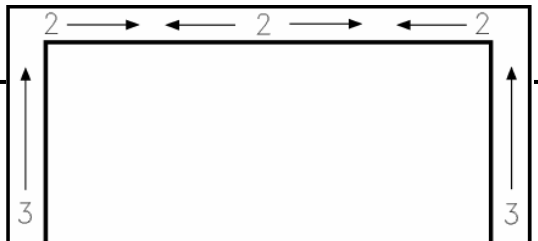


Figure 5-17: Door Seal Installation

1. Open the door.
2. Remove the old seal.
3. Clean the groove around the cabinet.

Note
Coating the seal with water may simplify fitting,

4. Refer to Figure 5-17.
5. Press the new seal in the groove, starting at corners (positions 1).
6. Press the middle of seal (positions 2) into the groove under the locking plate, while pressing the seal into the corners.
7. Press the remaining part of the seal into the groove working upwards in the direction of the arrows (positions 3).

Note
Coating the seal with water may simplify fitting,

5.3.2 Toe Kick (Plinth Removal)

1. Refer to Figure 5-1, as necessary.
2. Remove the screw caps.
3. Remove the retaining screws

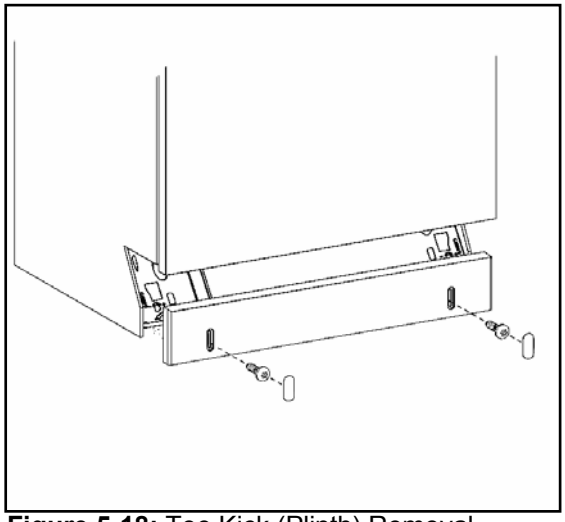


Figure 5-18: Toe Kick (Plinth) Removal

5.3.3 Cover Plate - Removal

Warning
Due to the close proximity of the terminal block the appliance must be unplugged before removing the cover plate.

1. Remove the toe kick (plinth) (5.3.2).
2. Remove the two cover retaining screws, Figure 5-19.
3. Remove the cover plate.

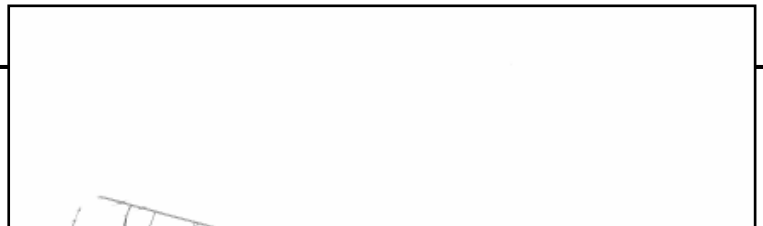


Figure 5-19: Cover Plate Removal

5.3.4 Connecting Strip (Lower Support) – Removal

Important

The connecting strip should only be removed with the appliance uninstalled, and positioned on its back.

Do not attempt to remove the connecting strip with the appliance installed in an upright position.

1. Remove the toe kick (plinth) (5.3.2).
2. Remove the cover plate (5.3.3).
3. Remove the drip pan (5.1.2)
4. Remove the retaining screws, Figure 5-20.
5. Unscrew the machine feet slightly.
6. Carefully remove the connecting strip. See note below.

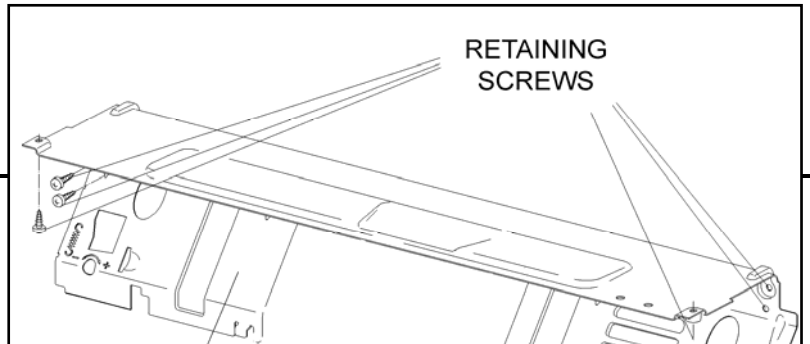


Figure 5-20: Connecting Strip Removal

Note
Use care when removing the connecting strip as the electrical connector to the waterproof inlet valves are held in place by retainers mounted on the inside of the connecting strip.

5.3.5 Multi-Plinth Removal (Door Tension Spring Housing)

1. Side panel removal (5.1.1).
2. Connecting strip removal (5.3.4).

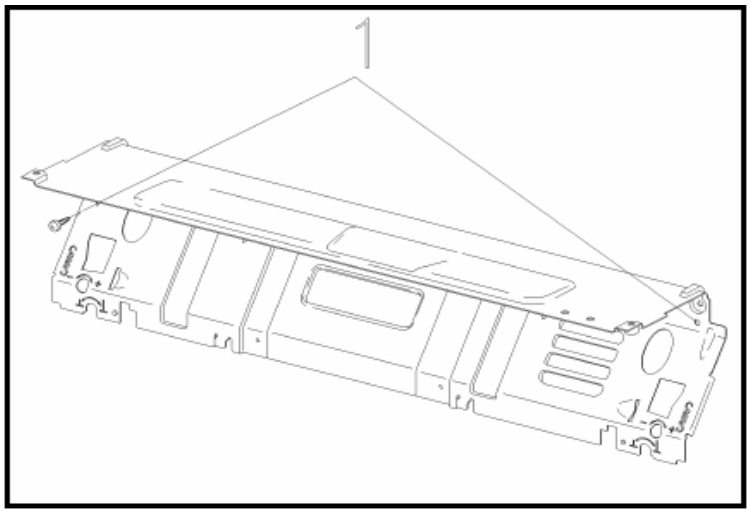


Figure 5-21: Connecting Strip

3. Remove the connecting strip retaining screws, Fig. 5-21, Item 1.
4. Release the cord from the spring.
5. Pull out the multi-plinth from the guide integrated in the rear panel.

Note
Take care removing the left plinth. The electrical connector to the waterproof inlet valves is held in place. To remove, release retaining clips.

5.3.6 Steam Condenser Removal

1. Remove the right side panel; see Side panel removal (5.1.1).
2. Remove the cutlery tray (if present).
3. Unscrew the splash protection cap (connection piece to air duct) in the cabinet.
4. Remove the vent screw.
5. Remove the bottom basket.
6. Remove the air duct (from the condenser).
7. Release the retaining lugs between the condenser and fan, Fig. 5-22, Item 1.
8. Remove the condenser.

Note
When refitting, make sure that the retaining lugs between the condenser and fan engage properly.

5.3.7 Fan Removal

1. Remove the right side panel; see Side panel removal,(5.1.1).
2. Drip pan removal (5.1.2).
3. Multi-plinth removal (Right side only) (5.3.5).
4. Disconnect all plug connections from the fan.

5. Release the retaining legs between the condenser and fan, Fig. 5-22, Item 1.
6. Pull the fan out of its connection to the condenser.

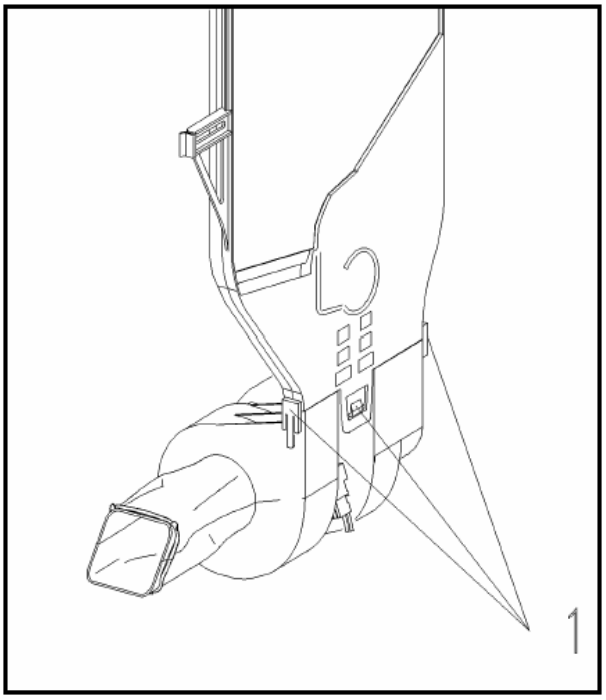
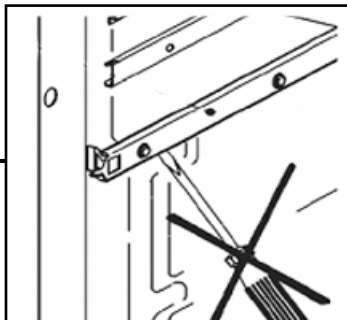


Figure 5-22: Condenser and Fan Assembly

Note
When refitting, make sure that the retaining lugs between the condenser and fan engage properly.

5.3.8 Basket Runners - Removal



Warning

Do not lever the basket runner off in the area of the bolts, since this could lead to
permanent damage to the wash cavity.

1. Open the door.
2. Remove the upper basket.
3. Pull the basket runner out far enough so that the clip (Figure 5-23, Item 1) between the bolt on the cabinet wall and the basket runner is visible.
4. Remove the retaining clip by pushing it upward.
5. Remove the basket runner.

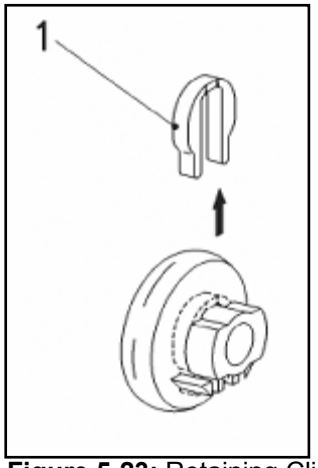


Figure 5-23: Retaining Clip

Note
In the event the retaining clip is damaged during removal, it must be replaced with a new clip.

5.3.9 Water Level Check

1. Fully open the water supply.
2. Run the Pre-wash program, wait about 3 minutes.

3. Do not cancel the program. Slowly open the door to observe the water level in the bottom of the wash cavity.

If the water level is within close proximity of the filter handle (about 4 mm above the filter), sufficient water has been taken in, Figure 5-24.

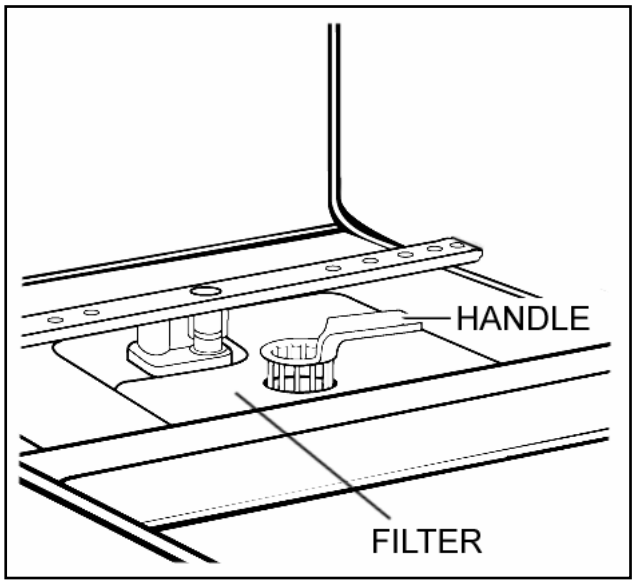


Figure 5-24: Water Level Reference

5.4 Water Paths

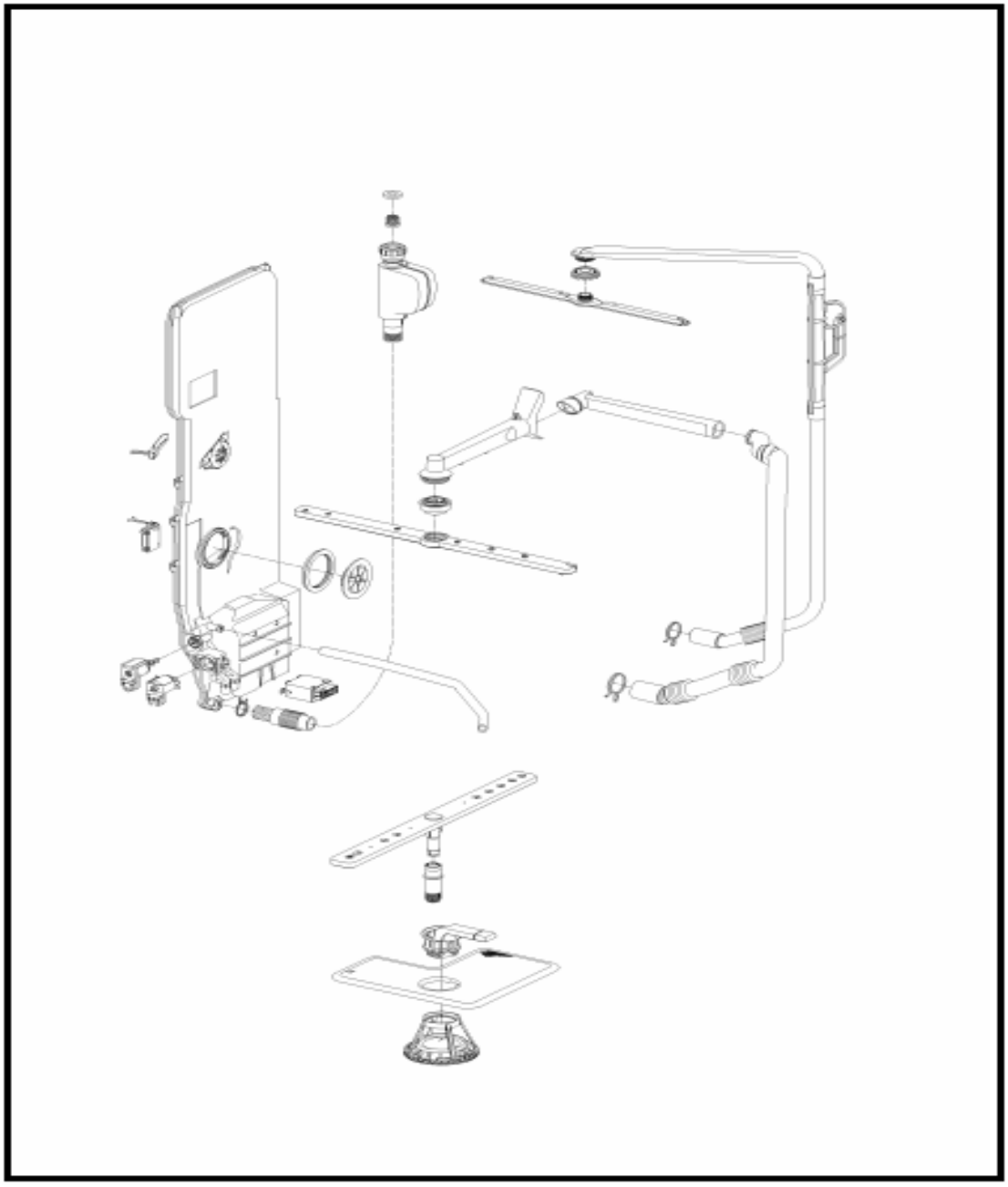


Figure 5-25: Water Path Layout

5.4.1 WaterProof System (WPS) Restrictor – Replacement

Note
For the G1000 and G2000 series, green restrictors (4.1 l/min) must be fitted in the WaterProof System valve holder.

1. Shut off the water supply.
2. Disconnect the WPS at the plumbing supply connection.
3. Remove the sealing washer and filter from inside the WPS connection. Using a 5mm nut-driver; press and tilt the restrictor to the side; as shown in Figure 5-26.
4. Remove the Restrictor - Figure 5-27.
5. Install the new restrictor using a suitable 5 mm socket / nutdriver to seat it firmly and evenly into place. Re-install the filter and sealing washer.

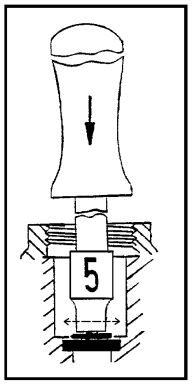


Figure 5-26: Tilting the Flow Restrictor

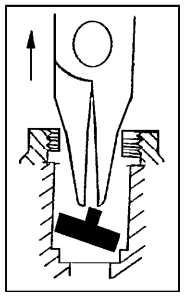


Figure 5- 27: Removing the Flow Restrictor.

5.4.2 WaterProof System (WPS) - Removal

Note
In the event the intake hose or water valves require replacement, the WPS **must** be replaced as a complete assembly. Individual replacement of the parts is not possible.

1. Shut off the water supply.
2. Disconnect the WPS at the plumbing supply connection.
3. Remove the left side panel (5.1.1).
4. Remove the drip pan (5.1.2).
5. Disconnect the hose from the water.
6. Disconnect the electrical connection.
7. Unclip the wiring from the retainers. Release the WPS retainer from the rear of the appliance and remove the WPS.

5.4.3 Flowmeter (circuit board) – Removal

Note
Only the circuit board on the flowmeter is the only part of the flowmeter that can be replaced individually. In the event of mechanical failure within the flowmeter the water inlet mixer must be replaced.

1. Remove the left side panel (5.1.1).
2. Release the circuit board retaining tab, and slide the board to remove it from the water inlet mixer.
3. Disconnect the wiring.

5.4.4 Top Spray Arm Removal

1. Remove the cutlery tray if present.
2. Remove the top basket
3. Unscrew the screw connection and remove the spray arm.

5.4.5 Middle Spray Arm Removal

1. Remove the top basket.
2. Unscrew the screw connection and remove the spray arm.

5.4.6 Bottom Spray Arm Removal

1. Remove the bottom basket.
2. Remove the spray arm.

5.4.7 Feed Pipe with Turbidity Sensor – Top Spray Arm, Removal

1. Remove the right side panel; see Side panel removal (5.1.1).
2. Disconnect the turbidity sensor plug connections.
3. Top spray arm removal (5.4.4).
4. Unscrew the counter nut.
5. Drip pan removal (5.1.2).
6. Disconnect the hose clip connection to the circulation pump.

5.4.8 Feed Pipe – Middle Spray Arm, Removal

1. Remove the right side panel. See Side panel removal (5.1.1).
2. Remove the top basket.
3. Dismantle the feed pipe on the rear panel inside the cabinet.

Note
To release the feed pipe in the rear panel through-feed area, hold the stub at the rear and pull it while at the same time pushing in the seal from the inside with a suitable screwdriver to reduce its cross-sectional area.

4. Drip pan removal, (5.1.2).
5. Remove the right multi-plinth, see Multi-plinth removal, (5.3.5).
6. Disconnect the hose clip connection to the circulation pump.

5.4.9 Spray Arm Sensor Removal

1. Remove the right side panel; see Side panel removal, (5.1.1).

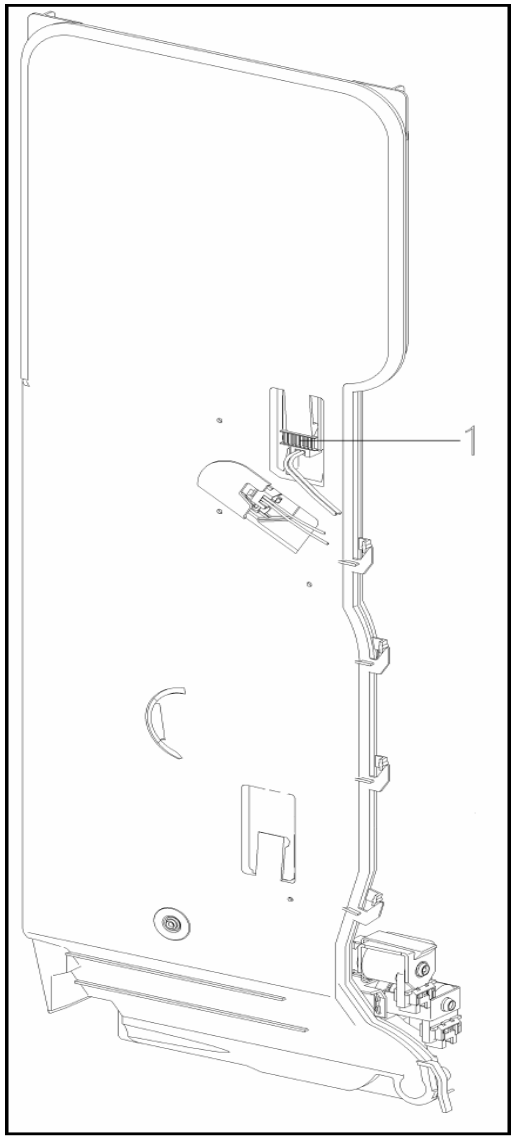


Figure 5-28: Spray Arm Sensor

2. Remove the spray arm sensor, Fig. 5-28, Item 1.
3. Disconnect its plug connection.

5.4.10 Water Inlet Mixer with Resin Chamber – Removal

1. Unscrew the water inlet mixer vent connection inside the cabinet.
2. Unscrew the salt container cap.
3. Remove the sealing ring.
4. Empty the salt container.
5. Close the opening with the service cap (available through Miele).
6. Unscrew the retaining nut.
7. Remove the left side panel (5.1.1).

Warning
Do not tilt the unit onto its right side, as this would cause water to run into the fan.

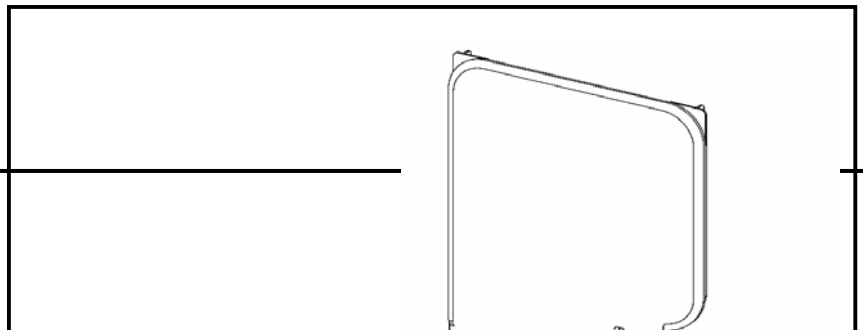
8. Remove the drip pan (5.1.2).
9. Remove the heating relay from the water inlet mixer.
10. Place a cloth or towel under the plug connections between the water inlet mixer and the water softener.
11. Disconnect the connection with hose clip to the water inlet mixer from the resin chamber.
12. Disconnect all plug connections.
13. Remove the wiring harness from its guide.
14. Pull off the salt container downwards in the direction of its connection stub.
15. Close the connection stub on the salt container with the service stopper (available through Miele).
16. Disconnect the connection with hose clip to the sump.
17. Pull the water inlet mixer out of the seal to the sump, tilt it to the side and remove it.

Reassemble by following these instructions in reverse order. The following should also be noted:

1. Pre-fit the vent screw on the water inlet mixer and apply soap solution to it as a slip lubricant.
2. Apply soap solution to the O-rings as a slip lubricant and fit them on the water inlet mixer stubs.
3. Refit the wiring harness in its guides on the salt container and water inlet mixer.
4. Check all electrical components in the drip tray area for residual moisture.

Dry – as necessary.

Thoroughly remove any traces of salt / water that may have leaked.
After reassembly, fill the salt container with salt and water.
A short program, e.g. Quick wash 104°F, without load should be run to remove any salt residues.Ensure all hardware is secured.



1 Middle Spray Arm Sensor
2 Flowmeter Circuit Board
3 Lower Spray Arm Senso
4 Solenoid for EGS Valve
5 Solenoid for Reactivation

Figure 5-29: Water Intake Mixer Assembly and Related Components

5.4.11 EGS Valve Solenoid - Removal

1. Remove the left side panel (5.1.1).
2. Remove the drip pan (5.1.2).
3. Remove the connecting strip (5.3.4).
4. Disconnect the electrical connector from the solenoid.
5. Press the retaining lugs to the side
6. Remove the EGS valve upwards.

5.4.12 Reactivation Valve – Removal

1. Remove the left side panel (5.1.1).
2. Remove the drip pan (5.1.2).
3. Remove the connecting strip (5.3.4).
4. Disconnect the electrical connector from the solenoid.
5. Twist the reactivation valve 90° clockwise.
6. Remove the reactivation valve upwards.

5.4.13 Salt Container - Removal

1. Remove the salt container cap from the cabinet interior.
2. Remove as salt water from the salt container.
3. Remove the sealing ring.
4. Close the opening with the service cap (available through Miele).
5. Unscrew the retaining nut.
6. Remove the left side panel (5.1.1).
7. Remove the drip pan (5.1.2).
8. Remove the heating relay from the water inlet mixer.
9. Place a cloth or towel under the plug connections between the water inlet mixer and the water softener.
10. Disconnect the connection with hose clip to the water inlet mixer from the resin chamber.
11. Disconnect the plug connections for the salt monitor from the salt container.
12. Remove the wiring harness from its guide.
13. Pull off the salt container in the direction of its connection stub.
14. Close the connection stub on the salt container with the service stopper (available through Miele).

Reassemble by following these instructions in reverse order. The following should also be noted.

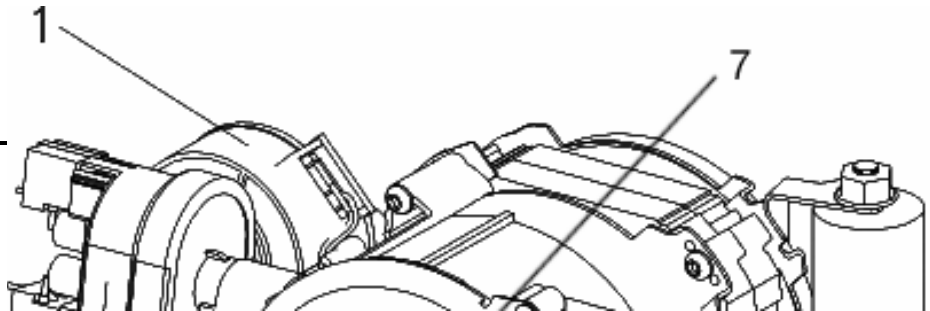
1. Fit the salt container, center it with the retaining nut and screw tight.
2. Apply soap solution to the O-rings as a slip lubricant and fit them on the water inlet mixer stubs.
3. Refit the wiring harness in its guides on the salt container and water inlet mixer.
4. Check all electrical components in the drip pan area for residual moisture. Dry – as necessary.
5. Thoroughly remove any traces of salt / water that may have leaked.
6. After reassembly, fill the salt container with salt and water.
7. A short program, e.g. Quick wash 104°F, without load should be run to remove any salt residues.
8. Ensure all hardware is secured.

5.4.14 Circulation Pump - Removal

1. Remove the motor holder retaining screw from the rear panel.

2. Remove the drip pan (5.1.2).
3. Disconnect the electrical connectors.
4. Disconnect the plumbing connections for the feed pipes to the top and middle spray arms.
5. Disconnect the plumbing connections between the circulation pump and the sump assembly.
6. Remove the circulation pump.

Important
When installing the circulation pump, the seal must be installed on the pump. Then slide the circulation pump (with seal installed on the pump) into the sump housing and secure.



1 Slide Shutter Motor
2 Heater Pressure Switch
3 Heater Element
4 Speed Sensor
5 Electrical Connection
6 Capacitor
7 Housing Cap

Figure 5-30: Circulation Pump and Related Components (Typical)

5.4.15 Circulation Pump - Service

All procedures in this section begin with removal of the circulation pump from the

appliance.

Refer to Figure 5-30, as directed.

Important
During reassembly of the circulation pump ensure:

1. A new sealing ring is installed
2. The sealing ring is seated correctly in the pump housing cap
3. The pump housing cap is evenly seated
4. The cap retaining screws are secure
5. The fastening clips are pressed over the retaining lugs

5.4.15.1 Pump Cap Removal / Heater Element – Access

1. Remove the cap retaining screws.
2. Release the retaining clips by pushing the clip to the side, while pressing down the cap.
3. Lightly twist the cover and pull away from the housing to remove.

5.4.15.2 Slide Shutter Removal

1. Circulation pump removal (5.4.14).
2. Heater Pressure Switch removal (5.4.15.7).
3. Pump housing cap removal (5.4.15.1).

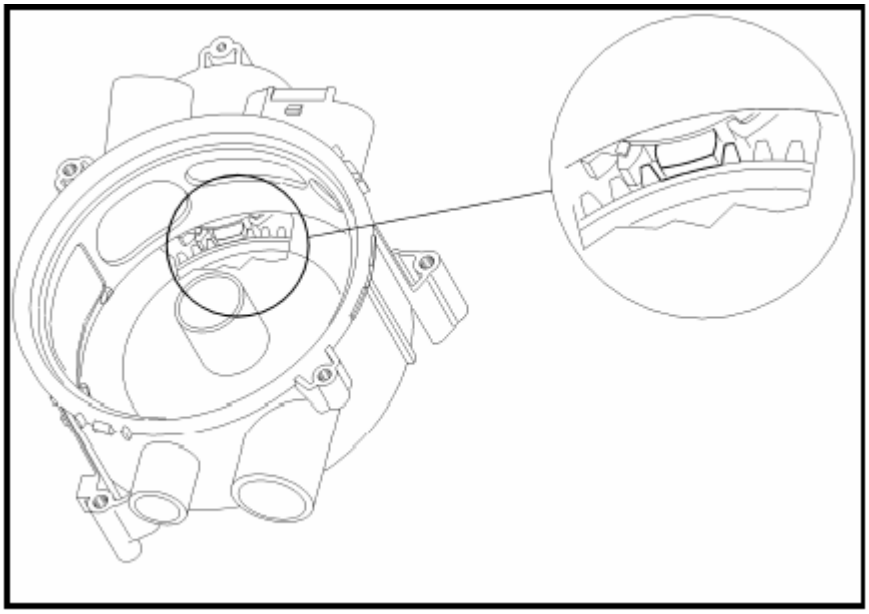


Figure 5-31: Slide Shutter Assembly

Note

The slide shutter can only be removed or fitted when the drive cog wheel is turned with the double tooth in the position shown, see Fig. 5-31.

4. Turn the drive cog wheel to bring the double tooth to the desired position as follows: Insert a small screwdriver in one of the holes on the cam (linked to the slide shutter control motor). Turn the cam until the slide shutter can be removed.
5. Remove the slide shutter.

Warning!
Before refitting the slide shutter in the pump housing, make sure that the double tooth on the drive cog wheel points to the arrow on the housing.

5.4.15.3 Drive Removal

1. Circulation pump removal (5.4.14).

2. Pump housing cap removal (5.4.15.1).
3. Slide shutter removal (5.4.15.2).

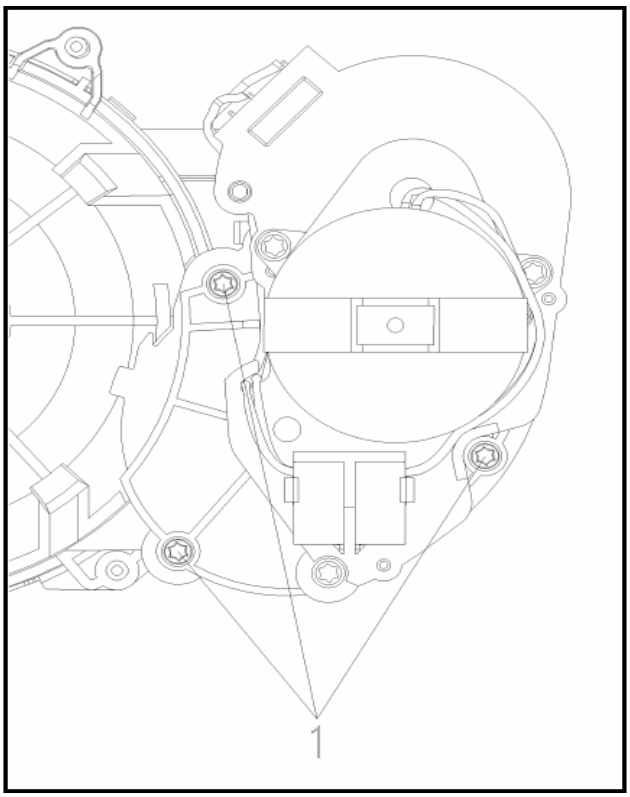


Figure 5-32: Drive Cam

4. Remove the drive retaining screws, Fig. 5-27, Item 1.

Warning!
When refitting, check that the O-ring is seated correctly on the drive cam.
Before refitting the slide shutter in the pump housing, make sure that the double tooth on the drive cog wheel points to the arrow on the housing.

5.4.15.4 Pump Impeller Removal

1. Circulation pump removal (5.4.14).
2. Pump housing cap removal (5.4.15.1).
3. Hold the shaft base with suitable pliers and unscrew the pump impeller clockwise.

5.4.15.5 Pump Housing Removal

1. Circulation pump removal (5.4.14).
2. Pump housing cap removal (5.4.15.1).
3. Pump impeller removal (5.4.15.4).
4. Remove the retaining screws.
5. Turn the pump housing counterclockwise to its stop.
6. Lift the pump housing from its guide.

5.4.15.6 Capacitor Removal

1. Circulation pump removal (5.4.14).
2. Use a socket wrench to release the nut on the capacitor holder.
3. Remove the capacitor.
4. Disconnect its plug connections.

5.4.15.7 Heater Pressure Switch Removal

1. Circulation pump removal (5.4.14).
2. Press the retaining lugs to one side with a suitable screwdriver.
3. Disconnect the plug connections.
4. Remove the pump's heater pressure switch.

Warning!
To avoid leakages, the sealing rings must always be fitted on the pump's heater pressure switch connection stubs.

5.4.15.8 Speed Sensor Removal

1. Circulation pump removal (5.4.14).
2. Lift the PCB slightly with a pair of needle nose pliers so that it can be gripped with the hand.
3. Turn the PCB 90° clockwise and remove it.

5.4.16 Drain Pump Removal

1. Remove the non-return valve from the sump under the filter combination.
2. Cover plate removal (5.3.3).
3. Disconnect the pump plug connections.

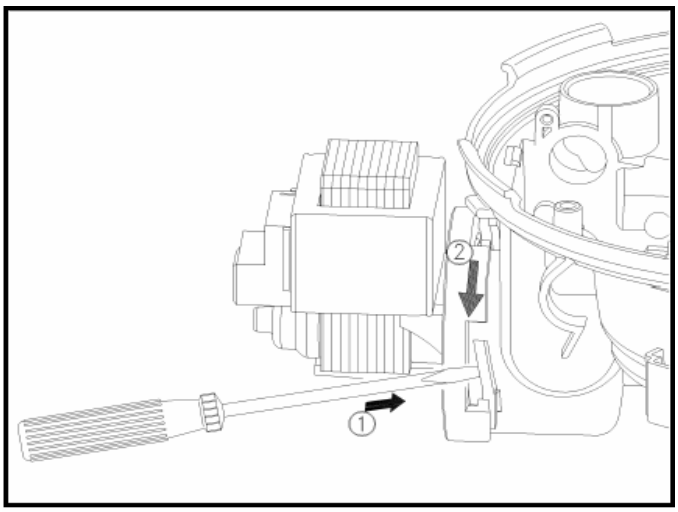


Figure 5-33: Drain Pump Retaining Clip

4. Open the safety retainer clip with a screwdriver, Fig. 5-33, Pos. 1.
5. Turn the pump clockwise and pull it from its holder, Fig. 5-33, Pos. 2.

Note
When refitting, apply a little water or soap solution to the pump seal as a slip lubricant. After fitting, check all the pump fastening points.

5.4.17 Float Switch Removal

1. Open the door.
2. Remove the bottom basket.
3. Remove the filter combination.
4. Remove as much residual water as possible from the sump and drain hose.
5. Lay the dishwasher on its back.
5. Drip pan removal (5.1.2).
6. Pull off the float switch.
7. Disconnect its plug connections.

Note
When refitting the float, make sure that the side with the Mat. No. faces downwards.

5.4.18 Sump Removal

1. Remove as much residual water as possible from the sump and drain hose.
2. Open the door.
3. Remove the bottom basket.
4. Remove the bottom spray arm.
5. Unscrew the bottom spray arm flange.
6. Remove the filter combination.
7. Lay the dishwasher on its back.
8. Drip pan removal, 5.1.2.
9. Remove the float switch.
10. Disconnect the hoses.
11. Disconnect the NTC sensor connections.
12. Drain pump removal (5.4.16).
13. Circulation pump removal (5.4.14).
14. Remove the heating wiring harness from the cable guide.
15. Unscrew the hose clip and remove it.
16. Remove the sump by pulling down strongly and evenly on the drain pump or circulation pump connections.
17. Remove the sealing ring.

Note

When refitting, the following should be noted,

1. Fit the sealing ring on the metal flange on the cabinet.
2. Apply liquid detergent as a slip lubricant to the outer surface of the seal.
3. Apply liquid detergent as a slip lubricant to the inside of the

Warning!
To avoid possible leakages later, the clip on the sump should **not** be overtightened.

5.4.19 NTC Temperature Sensor Removal

1. Open the door.
2. Remove the bottom basket.
3. Remove the bottom spray arm.
4. Remove the filter combination.
5. Remove as much residual water as possible from the sump and drain hose.
6. Lay the dishwasher on its back.
7. Remove Drip pan, 5.1.2
8. Disconnect the NTC temperature sensor plug connections.
9. Remove the NTC temperature sensor.
10. Remove the sealing ring.

5.4.20 Filter Combination Dismantling

Note
During reassembly, a locking piece must be fitted to prevent the filter combination from falling apart, see Filter combination assembly (with locking piece) (5.4.22).
As an alternative, the micro fine filter and the handle piece (crown coarse filter) must be exchanged together, see Filter combination assembly (new micro fine filter and handle) (5.4.21).

1. Open the filter cap.

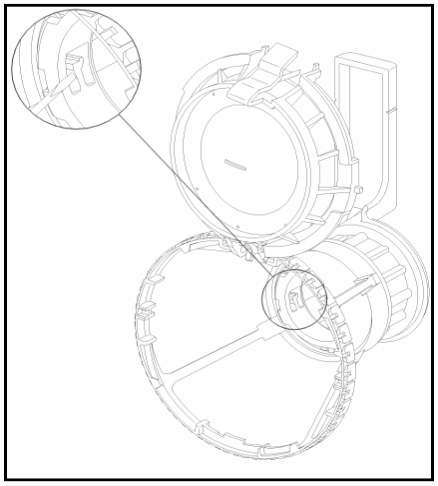


Figure 5-34: Combination Filter

Note
If the filter combination is already held together with a locking piece, this must be broken open and removed.

2. Place a screwdriver on the retaining clip spring, Fig. 5-34, and press against it.
3. Turn the handle clockwise and release the filter combination clip connection.

5.4.21 Filter Combination Assembly (New Micro Fine Filter and Handle)

Note
During assembly, the dishwasher is used as a guide.

If a new micro fine filter and handle (crown coarse filter) are used, a locking piece is not required.

1. Place the micro fine filter in the sump. Ensure that the lug is positioned towards the rear of the machine.

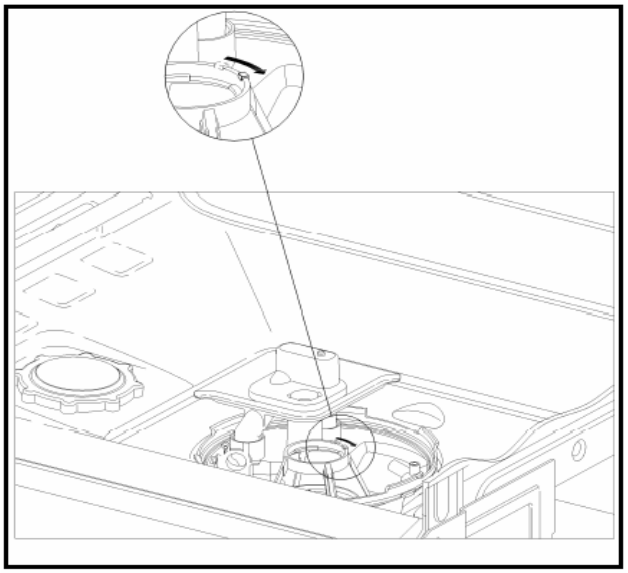


Figure 5-35: Micro Fine Filter Installation

2. Turn the micro fine filter clockwise as far as possible, Fig. 5-35.
3. Place the large surface area fine filter in position.

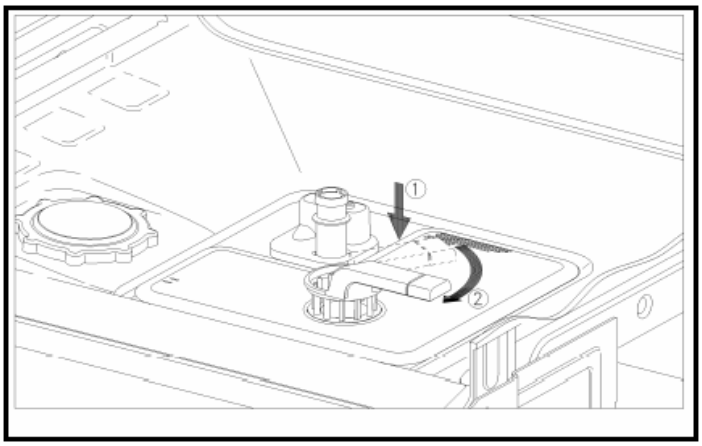


Figure 5-36: Filter Combination Lock/Unlock Positions

4. Press the large surface area fine filter downwards, Fig. 5-36, Pos. 1.
5. Fit the handle (crown coarse filter) and turn it clockwise as far as possible, Fig. 5-36, Pos. 2.
6. Carry out a visual check: The handle (crown coarse filter) should be parallel to the door, Fig. 5-36.
7. Carry out a functional check: Remove the filter combination and refit it.

5.4.22 Filter Combination Assembly (with Locking Piece)

Note
During assembly, the dishwasher is used as a guide.

1. Place the micro fine filter in the sump. Ensure that the lug is positioned towards the rear of the machine.
2. Turn the micro fine filter clockwise as far as possible, Fig. 5-35.
3. Place the large surface area fine filter in position.
4. Press the large surface area fine filter downwards, Fig. 5-36, Pos. 1.
5. Fit the handle (crown coarse filter) and turn it clockwise as far as possible, Fig. 5-36, Pos 2.
6. Carry out a visual check: The handle (crown coarse filter) should be parallel to the door, Fig. 5-36.
7. Remove the filter combination.
8. Open the filter cap.

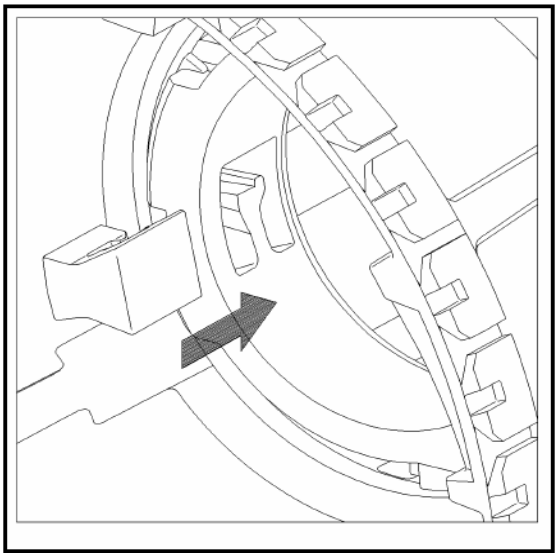


Figure 5-37: Combination Filter Locking Clip (Unlocked)

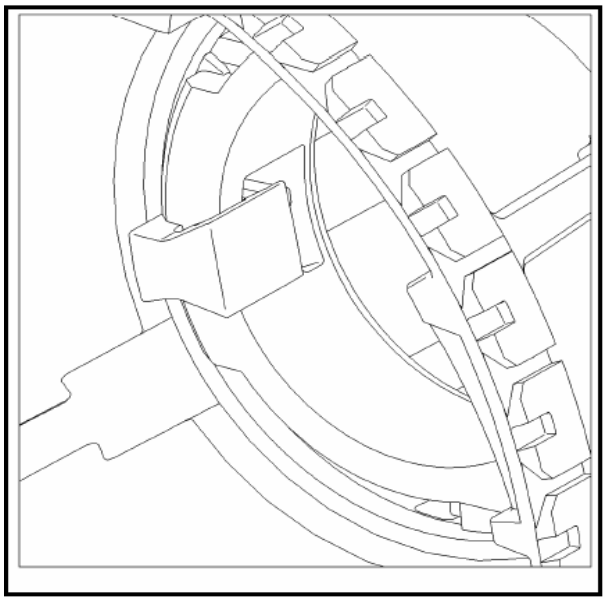


Figure 5-38: Combination Filter Locking Clip (Locked)

9. Fit the locking piece, Mat. No. 06248730, to prevent the retaining clip spring opening, see Fig. 37 and 38.

5.5 Electronic Unit

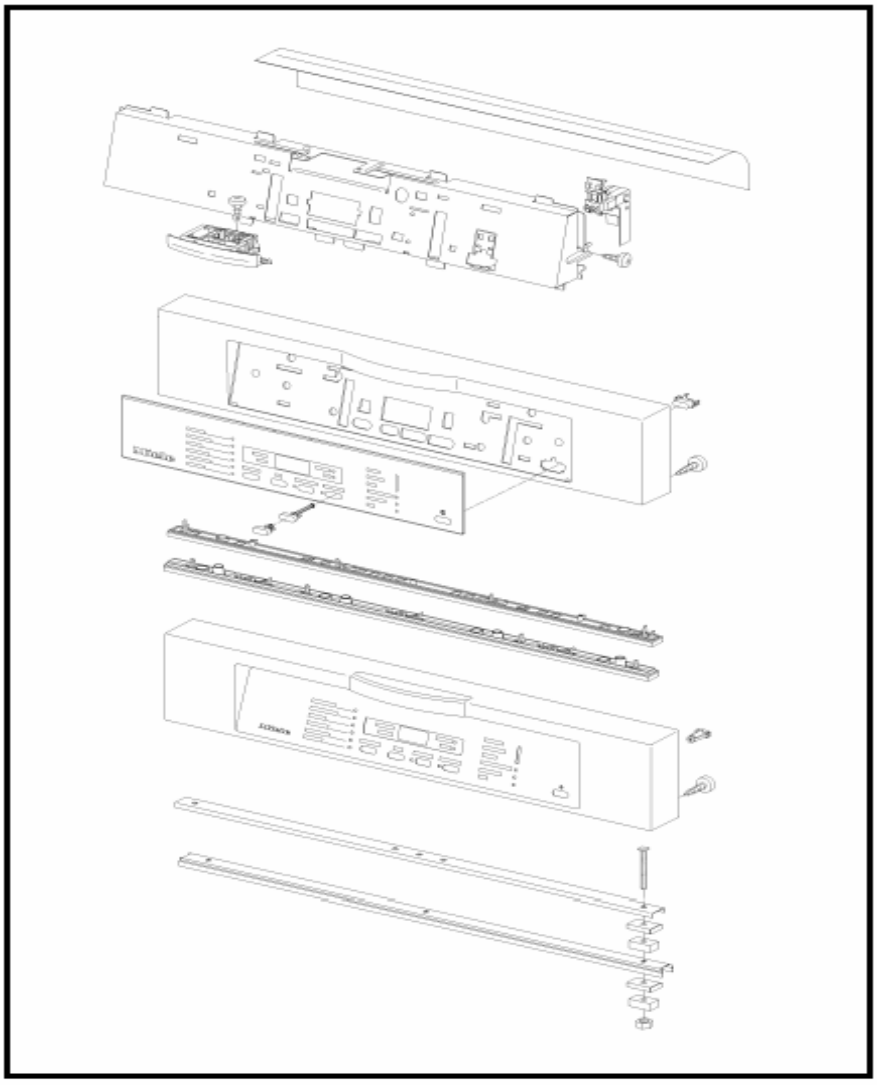


Figure 5-39: Electronic Integrated Model

5.5.1 Mains Switch Removal (Integrated)

1. Fascia panel removal (5.2.4).
2. Remove the screws from the sides of the door inner panel.
3. Remove the middle screw from the top of the door inner panel.
4. Tilt the holding plate to the front.

Note
If the dishwasher has a furniture front, take care to insert a towel or similar between its top edge and the fascia to prevent the risk of scratching.

5. Disconnect all plugs.

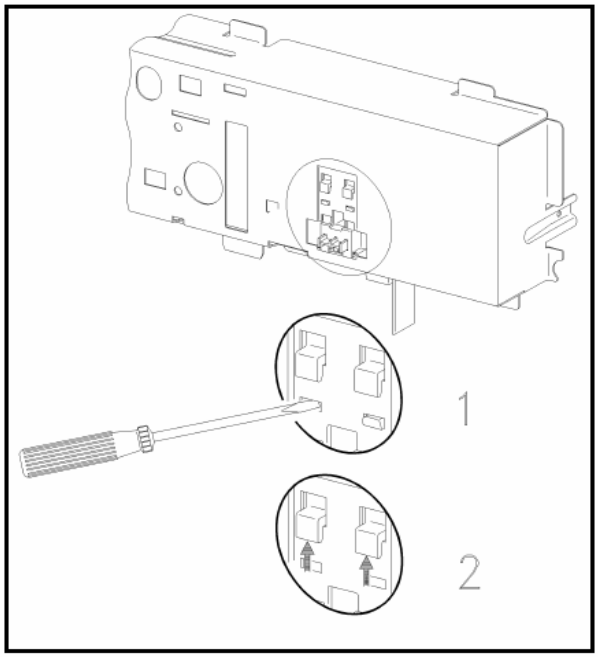


Fig. 5-40: Mains Switch Removal

6. Press in the retaining lugs; see Fig. 5-40, Pos 1.
7. Slide the mains switch upwards, see Fig. 5-40, Pos.2, and remove it from its holder.

Note
When refitting the holding plate, make sure that the electronic unit protective foil is pulled down at the bottom so that it is below the plug area.

5.5.2 Electronic Unit Holder Removal

1. Door outer panel removal (5.2.3).
2. Fascia panel removal (5.2.4).
3. Remove the screws from the sides of the door inner panel.
4. Remove the door contact switch retaining screw.
5. Disconnect all plug connections at the electronic unit.
6. Remove the holder with electronic unit.
7. Remove the lock with door contact switch.

5.5.3 Electronic Unit Removal (Integrated)

1. Fascia panel removal (5.2.3).
2. Pull out the switch buttons.

Note
If the dishwasher has a slanted fascia, the door outer panel must be removed, see Door outer panel removal, 5.3.1.

3. Remove the screws from the sides of the door inner panel.
4. Remove the middle screw from the top of the door inner panel.
5. Tilt the holding plate to the front.

Note
If the dishwasher has a furniture front, take care to insert a towel or similar between its top edge and the fascia to prevent the risk of scratching.

6. Disconnect all plugs.
7. Use a small screwdriver to press in all the retaining lugs (6) of the electronic unit on the holding plate (first at the bottom and then at the top).
8. Remove the electronic unit.

Note
Only the complete electronic unit can be exchanged.

Note
Take care with the following during reassembly:
- The fascia must be fitted before the switch buttons are refitted.
- Ensure the switch buttons are fitted correctly. The bottom is recessed.

6.0 Fault Diagnosis

6.1 Diagnostic Modes – Overview

The G1000 / G2000 series dishwashers contain the following diagnostic modes: Customer Programming Mode, Service Programming Mode and Service Mode.

Access to the different modes varies by model number.

Functions, settings and parameters vary by model number. Refer to the model specific information contained in this section.

USA Models are listed as follows:

Section	Series	Model Number	Sub-Section
6.2	Advanta Series	G2020	6.2.1
		G2020SC	
		G2170Vi	6.2.2
		G2170CVi	
6.3	Inspira Series	G2140	6.3.1
		G2140SC	
		G2140i	
		G2140SCi	
		G2150SC	
		G2180Vi	6.3.2
		G2180SCVi	
		G1180SCVi	
6.4	Optima Series	G2420SCi	6.4.1
		G2430SC	
		G2430SCi	
		G1470SCVi	6.4.2
		G2470SCVi	
6.5	Excella	G2630SCi	6.5.1
		G2670SCVi	6.5.2
6.6	LaPeral	G2830SCi	6.6.1

Table 6-1: Diagnostic Mode Overview by Series / Model Number

6.1.1 Water Hardness Setting – Checking and Programming

Access the programming mode.

The display shows **P** and the set value alternately. Setting range: P0 to P70 = Water hardness.

E.g. P15 (standard setting) corresponds to 15 gr/gal, (15°d), see Table 6-2.

Water hardness (°d, degree of German hardness)		Grains per Gallon Gr/gal	Display
Sensor softener active (on certain models)		--	P0
Without softener	1°d	1	P1
2°d		2	P2
3°d		3	P3
***		***	***
***		***	***
36°d		36	P36
37 - 50°d		37 – 50	P50
51 - 60°d		51 – 60	P60
61 - 70°d		61 - 70	P70

Table 6-2: Water Hardness: Standard setting: 15 gr/gal (15 °d)

6.2 Advanta Series

6.2.1 Advanta Series - G2020

6.2.1.1 G2020 - Programming Mode

Accessing

1. Press and hold the **Start/Stop** button.
2. Switch on the machine.
3. Release the **Start/Stop** button.
4. Immediately press and release the **Start/Stop** button 5 times and at the 5th time hold until the Start/Stop LED flashes rapidly.
5. Release the **Start/Stop** button

If the Start/Stop LED does not flash, repeat the procedure.

Technical Information

Acknowledgement Indicator

Successful accessing of the Service Dept. programming mode is indicated by a rapid flashing **Start/Stop** LED (5 Hz)

Options

Refer to Tables: 6.3 through 6-6.

Control Dial Position	Function	Programming	Display	Flashing Rhythm of Rinse LED		
1 o'clock	Pos. 1 Reset	Turn the control dial to the 1 o'clock position. To reset all parameters (both customer and Service programming) to the delivery conditions, press the Start/Stop button.	With this program function, all parameters can be reset to the standard settings. The Rinse LED flashes 1x briefly intermittently. If the Rinse LED is off, at least one setting was modified. If the Rinse LED flashes, no modifications have been made.	**Long**	**Short**	**Display**
				-	**-**	**-**
				-	**1**	**-**
3 o'clock	Water Hardness	Turn the control dial to the 3 o'clock position. To change the water hardness setting, press the Start/Stop button	Setting range: 1 – 88 gr/gal. If the Rinse LED flashes 4x, this corresponds to the water hardness range 15-19 gr/gal (factory setting) *1	**Long**	**Short**	**Display**
				-	1	1-5
				-	2	6-9
				-	3	10-14
				-	4	15-19
				-	5	20-25
				-	6	26-31
				-	7	32-38
				-	8	39-45
				-	9	46-63
				1	-	63-88
5 o'clock	Dispensed rinse aid quantity setting	Turn the control dial to the 5 o'clock position. To change the amount of dispensed, press the Start/Stop button to adjust setting	Setting range: 0 – 6 ml. If the Rinse LED flashes 3x. This corresponds to a factory setting of 3ml.	**Long**	**Short**	**Display**
				-	-	0 ml
				-	1	1 ml
				-	2	2 ml
				-	**3**	**3 ml**
				-	4	4 ml
				-	5	5 ml
				-	6	6 ml

Table 6-3: G2020 Programming Mode Options (continued on Table 6-4)

Control Dial Position	Function	Programming	Display	Flashing Rhythm of Rinse LED		
11 o'clock	Pos. 12: Resetting standard settings	To move through the levels, turn the control dial to the 11 o'clock position. Press the Start/Stop button 1x. Turn the Control dial to the 9 o'clock position. To reset all parameters (modified by customer) to the factory setting, press the Start/Stop button.	With this programming function, all parameters that can be modified by the customer, can be reset to the factory setting. If the Rinse LED is off, at least one setting was modified. If the Rinse LED flashes, the parameters are as in the factory setting.	**Long**	**Short**	**Display**
				-	-	-
	Pos. 20: Wash temperature modification	To move through the levels, turn the control dial to the 11 o'clock position. Press the Start/Stop button 3x. Turn the control dial to the 3 o'clock position. To change the temperature, press the Start/Stop button.	Options: Rinse LED is off = wash temperature per factory setting; Rinse LED flashes = increased wash temperature. An increase in wash temperature with a resulting extension in program running time.	**Long**	**Short**	**Display**
				-	-	-

Table 6-4: G2020 Programming Mode Options (cont. from Table 6-3) (cont. on Table 6-5)

Control Dial Position	Function	Programming	Display	Flashing Rhythm of Rinse LED		
11 o'clock	Pos. 22: Program running time reduction	To move through the levels, turn the control dial to the 11 o'clock position. Press the Stop/Start button 3x. Turn the control dial to the 6 o'clock position. To change the setting, press the Start/Stop button.	Options: Rinse LED is off = program running time per factory setting; Rinse LED flashes = shortened program running time. Program-dependent short-cut due to a decrease in temperature and/or the removal of hold times.	**Long**	**Short**	**Display**
				-	-	-
	Pos. 23: Water quantity normal / increased	To move through the levels, turn the control dial to the 11 o'clock position. Press the Start/Stop button 3x. Turn the control dial to 7 o'clock position. To change the setting, press the Start/Stop button.	Options: Rinse LED is off = normal water amount; Rinse LED flashes = increased water amount.	-	-	-
	Pos. 26: Second interim rinse selection	To move through the levels, turn the control dial to the 11 o'clock position. Press the Start/Stop button 4x. Turn the control dial to 3 o'clock position. To change the setting, press the Start/Stop button.	Options: Rinse LED is off = program sequence per factory setting; Rinse LED flashes = second interim rinse added.	**Long**	**Short**	**Display**
				-	-	-
	Pos. 27: Enhanced drying	To move through the levels, turn the control dial to the 11 o'clock position. Press the Start/Stop button 4x. Turn the control dial to 5 o'clock position. To change the setting, press the Start/Stop button.	Options: Rinse LED is off = normal drying; Rinse LED flashes = enhanced drying activated.	**Long**	**Short**	**Display**
				-	-	-

Table 6.5: G2020 Programming Mode Options (cont. from Table 6-4) (cont. to Table 6-6).

Control Dial Position	Function	Programming	Display	Flashing Rhythm of Rinse LED		
11 o'clock	Pos. 36: Machine height setting *2	To move through the levels, turn the control dial to the 11 o'clock position. Press the Start/Stop button 5x. Turn the control dial to 9 o'clock position. To change the setting, press the Start/Stop button.	Options: Rinse LED is off = standard machine height (G1xxx); Rinse LED flashes = XXL units (G2xxx)	**Long**	**Short**	**Display**
	Pos. 38: Model variant setting *2	To move through the levels, turn the control dial to the 11 o'clock position. Press the Start/Stop button 6x. Turn the control dial to 3 o'clock position. To change the setting, press the Start/Stop button.	Options: Rinse LED is off = models with UKT: Gx04x; Rinse LED flashes = models without UKT: Gx02x	-	-	-
	Pos. 39: Country variant setting *2	To move through the levels, turn the control dial to the 11 o'clock position. Press the Start/Stop button 6x. Turn the control dial to 5 o'clock position. To change the setting, press the Start/Stop button.	The flashing rhythm of the LED Rinse shows which country version is programmed: 1x = EUR (Europe); 2x = AUS (Australia); 3x = USA, 4x = JPN (Japan), 5x = I/E (Italy/Spain), 6x = SER (Southern Europe) *3	**Long**	**Short**	**Display**
				-	-	-

Table 6.6: G2020 Programming Mode Options (continued from Table 6-5)

Warning!
Do not change settings in Position 36, 38 or 39. Any changes made will affect the operation of the dishwasher.

*1 If the dishwasher is hooked up to an external softener system, which operates on the ion exchange principle (meaning salt reactivation), the water hardness supplied by that system has to be set. If this value is not known, set to 10 gr/gal.

*2 If the electronic unit is replaced during service work, it must be programmed as follows: First set the country version and model version, then switch the dishwasher off. Repeat the accessing procedure and set the machine height, then set the on-site water hardness.

*3 The version Southern Europe covers the following countries: Portugal, France, The Netherlands, Belgium and Great Britain.

Save and Quit
Switch off the unit.

6.2.1.2 G2020 - Service Mode

Accessing
1. Press and hold the **Start/Stop** button.
2. Switch on the machine.
3. Release the **Start/Stop** button.
4. Immediately press and release the **Start/Stop** button 3 times and at the 3rd time hold it until the **Start/Stop** LED flashes.
5. Release the **Start/Stop** button

If the Start/Stop LED has not started to flash within approx. 4 sec., the accessing procedure must be repeated.

Acknowledgement indicator
Successful accessing of the Service mode is indicated by a slow flashing **Start/Stop** LED (1 Hz).

Options
Refer to Tables: 6-6 through 6-7.

Control Dial Position	Function	Programming	Display	Flashing Rhythm of Rinse LED		
				Long	Short	Display
1 o'clock	Pos. 1: Fault memory display	Turn the control dial to the 1 o'clock position. While the Rinse LED flashes, make a note of the fault code, then press the Start/Stop button. If the same fault is shown again, it means only this one fault is saved. If a further fault is shown, press the Start/Stop button again. Repeat this procedure until all faults are read.	If the Rinse LED is off, no faults are registered. The flashing rhythm of the Rinse LED indicates which faults are registered in the fault memory.	-	-	F0
				-	1	F1
				-	2	F2
				1	1	F11
				1	2	F12
				1	3	F13
				1	4	F14
				1	8	F18
				1	9	F19
				2	4	F24
				2	5	F25
				2	6	F26
				4	-	F40
				5	1	F51
				5	2	F52
				6	9	F69
				8	-	F80
				8	8	F88
	Delete fault memory	Turn the control dial to the 1 o'clock position. Press the Start/Stop button and hold it until the Rinse LED goes out.	If the Rinse LED is off, the fault memory no longer contains any faults.	-	-	-

Table 6-7: G2020 Service Mode Options (Continued on Table 6-8)

Control Dial Position	Function	Programming	Display	Flashing Rhythm of Rinse LED		
3 o'clock	Component test	Turn the control dial to the 3 o'clock position. To start the component test, or to access the next component to be tested, press the Start/Stop button.	The flashing rhythm of the Rinse LED indicates which component test is activated. For the sequence of component testing as well as background information and access procedure, refer to the component test information. Ref. to 6.2.1.3 For further information.	**Long**	**Short**	**Display**
				-	-	U0
				-	1	U1
				-	2	U2
				-	3	U3
				-	4	U4
				-	5	U5
				-	6	U6
				-	7	U7
				-	8	U8
				-	9	U9
				1	0	U10
				1	1	U11
				1	2	U12
				1	3	U13
				1	4	U14
5 o'clock	Operating hours	Turn the control dial to the 5 o'clock position. To check for operating hours, press the Start/Stop button.	The flashing rhythm of the Rinse LED shows the registered operating hours: Each long flash corresponds to 1000 hours and each short flash 100 hours.	**Long**	**Short**	**Display**
				-	**-**	**-**
6 o'clock	LED test	Turn the control dial to the 6 o'clock position. To start the control panel test, press the Start/Stop button.	All LEDs are lit.	**Long**	**Short**	**Display**
				-	**-**	**-**

Table 6-8: G2020 Service Mode Options (continued from Table 6-7)

Save and quit
Switch off the unit.

6.2.1.3 G2020 Component Test – Information

After selecting the service mode and successfully accessing the component test program, individual electrical components can be activated via the program button (Start/Stop for Integrated models). During this procedure, certain components can only be activated via special mini-programs.

Test sequence and background information:

U1. R1, Y2, M6, wash sequence with heating (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. At the same time the water inlet valve is activated, the slide shutter is set to the middle spray arm position. After 2.7 l has been registered, the EGS (electronically controlled water softener) valve is also opened until the total desired intake quantity has been reached. The circulation pump with switched auxiliary winding is then operated. At the same time the slide shutter is activated with its setting alternating at 15 sec. intervals. After an additional 60 sec., the heating relay is switched on for 300 sec. and the water is heated to 122°F. The mini-program ends with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off).

Note
The mini-program does not include any fault testing function.

U2. 1K1, heating relay:
The heating relay is activated for 60 sec

U3. M8, drain pump:
The drain pump is activated for 60 sec.

U4. Y2, Y5, water inlet valves with EGS (electronically controlled water softener) valve (mini-program):

The water inlet valve is activated (on models with and without slide shutter) until 5.4 l has been taken in. After 2.7 l has been registered, the EGS valve is also opened until the total desired intake quantity has been reached.

Warning!
If the flow meter is defective, the EGS valve is not activated.

U5. Y5, EGS valve:
The EGS valve is activated for 60 sec.

U6. M6, circulation pump switched winding relay:
The circulation pump with switched auxiliary winding is activated. With a controlled circulation pump, the activation is at the maximum speed for controlled operation. The circulation pump is activated for 30 sec., but the auxiliary winding relay is only activated during the first 15 sec.

Note
During the period when the auxiliary winding relay is activated, a higher circulation pump current of approx. 0.9 A flows. Afterwards the current is approx. 0.16 A.

U7. Vacant

U8. Vacant

U9. Vacant

U10. Y50, combination dispenser:
The combination dispenser is activated with pulsed operation for 60 sec. The pulse rhythm throughout the test period is 10 sec. on / 10 sec. off.

U11. Y38, Y2, Y5,…, reactivation sequence (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on/2 sec. off). The water inlet valve with EGS valve is then activated until 250 ml has been reached or 60 sec. has elapsed. The reactivation valve is then activated for 120 sec. Following this the water inlet valve and the drain pump, which begins with pulsed priming (2 sec. on/2 sec. off), are operated together for 60sec.

Starting with software version ID 984 the reactivation component test operates as follows:

At the start of the mini-program the drain pump M8, water inlet valve Y2 and EGS valve Y5 are activated at the same time. M8 pumps water for 30 sec. and is primed with pulsed priming (2 sec. on/2 sec. off). Y2 and Y5 are switched off when 250 ml has been reached or 60 sec. has elapsed. The reactivation valve Y38 is then activated for 150 sec. following this, the water inlet valve and the drain pump, which begins without pulsed priming (2 sec. on/2 sec. off), are operated together for 60 sec.

U12. Vacant

U13. Y38, reactivation valve:
The reactivation valve is activated for 60 sec.

U14. Vacant

6.2.2 Advanta Series – G2170

6.2.2.1 G2170 - Programming Mode

Initial requirements

1. Open the door.
2. Switch off the machine.

Accessing

1. Press and hold the program button.
2. Switch on the machine.
3. Release the program button.
4. Immediately press and release the program button 5 times and at the 5th time hold until the Rinse & Hold LED flashes rapidly.
5. Release the program button

If the Rinse & Hold LED has not started to flash within approx. 4 sec., the accessing procedure must be repeated.

Acknowledgement indicator

Successful accessing of the Service Dept. programming mode is indicated by a rapid flashing Rinse & Hold LED (5 Hz)

Options

Refer to Tables: 6-9 through 6-14.

Note

Upon accessing the programming mode, to navigate between the various functions and making changes within them you must do the following:

1. To navigate the Functions insure the **Intake/Drain** Lt. is solid. If not, hold the **Program** button until the **Intake/Drain** Lt. becomes a solid light. Now the **Program** button can be used to navigate the Functions bar.

2. To make setting changes within each Function, hold the **Program** button until you see a blinking light from the **Intake/Drain** Lt. Now you can use the **Program** button to make your setting changes within each Function. The **Sani-Wash** Lt. will indicate what the setting is for each Function.

Technical Information

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Indication	Flashing Rhythm of SaniWash LED		
Long	**Short**	Pos. 0: Software version ID check	Do not press the Program button. The Intake/Drain LED is off.	The Sani-Wash LED is off or flashes. Shows the software version ID No., e.g. -769	**Long**	**Short**	**Display**
-	-				-	-	ID No.
Long	**Short**	Pos. 1: Reset	Press the **Program** button 1x.	The **Intake/Drain** LED flashes 1x briefly intermittently. With this programming function, all parameters can be reset to delivery condition.	**Long**	**Short**	**Display**
					-	**-**	P0
-	1		To reset all parameters to the delivery condition, press the **Program** button and hold until the **Intake/Drain** LED flashes. Then press the **Program** button briefly *2	If the **SaniWash** LED is off, the values do not correspond to the delivery condition. If the **SaniWash** LED flashes, all values are as in the delivery condition.	-	1	P1
		Pos. 2: Set the water hardness	Press the **Program** button 2x. To modify the water hardness setting, press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 2x briefly intermittently. The current setting can be seen from the flashing rhythm of the **SaniWash** LED. If the LED flashes 4x briefly intermittently, this indicates a factory setting of 15-19 gr/gal.	**Long**	**Short**	**gr/gal**
					-	1	1-5
					-	2	6-9
					-	3	10-14
					-	**4**	**15-19**
-	2				-	5	20-25
					-	6	26-31
					-	7	33-38
					-	8	39-45
					-	9	46-63
					1	-	64-88

Table 6-9: G2170 Programming Mode Options (continued on Table 6-10)

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Indication	Flashing Rhythm of SaniWash LED		
Long	**Short**	Pos 3: Set amount of rinse aid dispensed	Press the Program button 3 times. To modify the dispensing amount, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then use the **Program** button to enter the desired setting changes. *2	The Intake/Drain LED flashes 3x rapidly intermittently. The current setting can be seen from the flashing rhythm of the **SaniWash** LED. If he LED flashes 3x briefly intermittently, this indicates a factory setting of 3ml. Setting range: 0-6 ml.	**Long**	**Short**	**Display**
-	3				-	-	0 ml
					-	1	1 ml
					-	2	2 ml
					-	**3**	**3 ml**
					-	4	4 ml
					-	5	5 ml
					-	6	6 ml
-	4	Pos 4: Buzzer on/off	Press the **Program** button 4x To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 4x rapidly intermittently. **SaniWash** LED off = Buzzer is actuvated (factory setting). **SaniWash** LED flashes = Buzzer is deactivated.	**-**	**-**	**P0**
					-	1	P1

Table 6-10: G2170 Programming Mode Options (Cont. from Table 6-9) (Cont. on Table 6-11).

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Indication	Flashing Rhythm of SaniWash LED		
Long	**Short**	Pos. 12: Reset to factory setting	Press the **Program** button 12x To reset all parameters to factory setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 1x long and 2x briefly intermittently. With this programming function, all parameters that can be modified by the customer can be reset to the factory setting. If the **SaniWash** LED is off, the values are not at the factory setting. If the **SaniWash** LED flashes, all values correspond to the factory setting.	**Long**	**Short**	**Display**
1	2				-	-	P0
					-	**1**	**P1**
Long	**Short**	Pos. 20: Set the wash temperature	Press the **Program** button 20x To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 2x long intermittently. The **SaniWash** LED is off = normal wash temperature; the **SaniWash** flashes = increased wash temperature with a resulting running time extension.	**Long**	**Short**	**Display**
2	-				**-**	**-**	**P0**
					-	1	P1

Table 6-11: G2170 Programming Mode Options (Cont. from Table 6-10) (Cont. on Table 6-12)

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Indication	Flashing Rhythm of SaniWash LED		
Long	**Short**	Pos. 22: Program running time reduction	Press the **Program** button 22x	The **Intake/Drain** LED flashes 2x long and 2x briefly intermittently.	**Long**	**Short**	**Display**
					-	**-**	**P0**
2	2		To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **SaniWash** LED is off = normal program cycle (factory setting); the **SaniWash** LED flashes = shortened program cycle. Reduction in running time due to a decrease in temperature and/or the removal of hold times.	-	1	P1
Long	**Short**	Pos. 23: Water quantity normal / increased	Press the **Program** button 23x.	The **Intake/Drain** LED flashes 2x long and 3x briefly intermittently.	**Long**	**Short**	**Display**
			To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **SaniWash** LED is off = normal water volume (factory setting); the **SaniWash** LED flashes = increased water volume.	**-**	**-**	**P0**
2	3				-	1	P1

Table 6-12: G2170 Programming Mode Options (Cont. from Table 6-11) (Cont. on Table 6-13)

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Indication	Flashing Rhythm of SaniWash LED		
Long	**Short**	Pos. 26: Add second interim rinse	Press the **Program** button 26x. To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 2x long and 6x briefly intermittently. The **SaniWash** LED is off = program cycle per factory setting; The **SaniWash** LED flashes = second interim rinse is added.	**Long**	**Short**	**Display**
2	6				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 27: Extended drying time	Press the **Program** button 27x To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 2x long and 7x briefly intermittently. The **SaniWash** LED if off = normal drying (factory setting); the **SaniWash** LED flashes = enhanced drying.	**Long**	**Short**	**Display**
2	7				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 36: Machine height setting *1	Press the **Program** button 36x. To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 3x long and 6x briefly intermittently. The **SaniWash** LED is off = normal machine height (G1xxx). The **SaniWash** LED flashes = XXL units (G2xxx).	**Long**	**Short**	**Display**
3	6				-	-	P0
					-	1	P1
Long	**Short**	Pos. 38: Model variant setting *1	Press the **Program** button 38x. To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 3x long and 8x briefly intermittently. The **SaniWash** LED is off = Gx18x and Gx171; the **SaniWash** LED flashes = Gx170	**Long**	**Short**	**Display**
3	8				-	-	P0
					-	1	P1

Table 6-13: G2170 Programming Mode Options (Cont. from Table 6-12) (Cont. on Table 6-14)

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Indication	Flashing Rhythm of SaniWash LED		
Long	**Short**	Pos. 39: Country variant setting *1	Press the **Program** button 38x.	The **Intake/Drain** LED flashes 3x long and 8x briefly intermittently.	**Long**	**Short**	**Display**
					-	1	EUR
					-	2	AUS
3	9		To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The flashing rhythm of the **SaniWash** LED shows which country variant is set: 1x = Europe; 2x = Australia; 3x = USA; 4x = Japan, 5x = Italy/Spain, 6x = Southern Europe. *3.	**-**	**3**	**USA**
					-	4	JPN
					-	5	IT/SP
					-	6	S/EUR

Table 6-14: G2170 Programming Mode Options (continued from Table 6-13)

*1 If the electronic unit is exchanged during service work, it must be programmed as follows: First set the country variant and model variant, then switch off the unit, repeat the accessing procedure and set the machine height.

*2 After the changes are made, hold the program button until the Intake/Drain LED is solid.

*3 The variant Southern Europe covers the following countries: Portugal, France, The Netherlands, Belgium and Great Britain.

Save and quit
Switch off the unit.

6.2.2.2 G2170 - Service Mode

Initial requirements

1. Open the door.
2. Switch off the machine.

Accessing

1. Press and hold the program button.
2. Switch on the machine.
3. Release the program button.
4. Immediately press and release the program button 3 times and at the 3rd time hold until the Rinse & Hold LED flashes rapidly.
5. Release the program button

If the Rinse & Hold LED has not started to flash within approx. 4 sec., the accessing procedure must be repeated.

Acknowledgement indicator

Successful accessing of the Service Dept. programming mode is indicated by a rapid flashing Rinse & Hold LED (5 Hz)

Options

Refer to Tables: 6-9 through 6-12.

Note

Upon accessing the programming mode, to navigate between the various functions and making changes within them you must do the following:

1. To navigate the Functions insure the **Intake/Drain** Lt. is solid. If not, hold the **Program** button until the **Intake/Drain** Lt. becomes a solid light. Now the **Program** button can be used to navigate the Functions bar.

2. To make setting changes within each Function, hold the **Program** button until you see a blinking light from the **Intake/Drain** Lt. Now you can use the **Program** button to make your setting changes within each Function. The **Sani-Wash** Lt. will indicate what the setting is for each Function.

Flashing rhythm of Intake/Drain LED		Function	Programming	Indication	Flashing rhythm of SaniWash LED		
Long	**Short**	Pos. 0: Software version ID check	Do not press the Program button. The Intake/Drain LED is off.	The Sani-Wash LED is off or flashes. Shows the software version ID No., e.g. -769	**Long**	**Short**	
-	-				-	-	ID No.
-	1	Pos. 1: Fault memory display and deletion	Press the Program button 1x. If the fault is indicated in the SaniWash LED, check if additional faults are registered. Press the Program button and hold it until the Intake/Drain LED flashes. Then press the Program button briefly. *1 To delete the fault memory, press the Program button and hold until the Intake/Drain LED flashes. Then press the Program button until the SaniWash LED goes out.	The Intake/Drain LED flashes 1x. If faults are saved into memory, these are indicated via the flashing rhythm of the SaniWash LED. Refer to 6.7 Fault code summary. The SaniWash LED is off = F0 (no faults).	-	-	F0
					-	1	F1
					-	2	F2
					1	1	F11
					1	2	F12
					1	3	F13
					1	4	F14
					1	8	F18
					1	9	F19
					2	4	F24
					2	5	F25
					2	6	F26
					4	-	F40
					5	1	F51
					5	2	F52
					6	9	F69
					7	-	F70
					8	8	F88
-	2	Pos.2: Component test	Press the Program button 2x. To start the component test, press the Program button and hold until the Intake/Drain LED flashes. Then press the Program button briefly. Press the Program button again to access each of the following components. *1	The Intake/Drain LED flashes 2x. The flashing rhythm of the SaniWash LED indicates which component is currently accessed. For the sequence of component testing as well as backgraound information and access procedures, refer to 6.2.2.3 Component test.	**Long**	**Short**	
					-	-	U0
					-	1	U1
					-	2	U2
					-	3	U3
					-	4	U4
					-	5	U5
					-	6	U6
					-	7	U7
					-	8	U8
					-	9	U9
					1	0	U10
					1	1	U11
					1	2	U12
					1	3	U13
					1	4	U14

Table 6-15: Service Mode (G2170) (Continued on Table 6-16)

Flashing rhythm of Intake/Drain LED		Function	Programming	Indication	Flashing rhythm of SaniWash LED	
Long	**Short**	Pos 4: Operating hours check	Press the **Program** button 3x.	The **Intake/Drain** LED flashes 3x.	**Long**	**Short**
-	3		To check the operating hours, press the **Program** button and hold until the **Intake/Drain** LED flashes. Then press the **Program** button briefly. *1	The flashing rhythm of the **SaniWash** LED indicates the saved operating hours. Each long flash of the **SaniWash** LED represents 1000 hours and each short flash 100 hours.	-	-
-	4	Pos. 5: Control Panel LED test	Press the **Program** button 4x.	The **Intake/Drain** LED flashes 4x.	-	-
			To start the control panel test: LED, press the **Program** button and hold until the **Intake/Drain** LED flashes. Then press the **Program** button briefly. *1	All LEDs are lit.		
-	5	Pos. 6: Control Panel Buzzer Test	Press the **Program** button 5x.	The **Intake/Drain** LED flashes 5x.	-	-
			To start the control panel test: Buzzer, press the **Program** button and hold until the **Intake/Drain** LED flashes. Then press the **Program** button briefly. *1	Buzzer on.		

Table 6-16: Service Mode (G2170) (Continued from Table 6-15)

*1 To make the desired setting adjustments. Hold the **Program** button until the **Intake/Drain** Lt. is blinking, then use the **Program** button to make your setting changes. Once done, hold the **Program** button until the **Intake/Drain** Lt. is solid again.

Save and quit

Switch off the unit.

6.2.2.3 G2170 Component Test – Information

After selecting the service mode and successfully accessing the component test program, individual electrical components can be activated via the program button (Start/Stop for Integrated models). During this procedure, certain components can only be activated via special mini-programs.

Test sequence and background information:

U1. R1, Y2, M6,…, wash sequence with heating (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. At the same time the water inlet valve is activated, the slide shutter is set to the middle spray arm position. After 2.7 l has been registered, the EGS (electronically controlled water softener) valve is also opened until the total desired intake quantity has been reached. The circulation pump with switched auxiliary winding is then operated. At the same time the slide shutter is activated with its setting alternating at 15 sec. intervals. After an additional 60 sec., the heating relay is switched on for 300 sec. and the water is heated to 122°F. The mini-program ends with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off).

Note
The mini-program does not include any fault testing function.

U2. 1K1, heating relay:
The heating relay is activated for 60 sec

U3. M8, drain pump:
The drain pump is activated for 60 sec.

U4. Y2, Y5, water inlet valves with EGS (electronically controlled water softener) valve (mini-program):

The water inlet valve is activated (on models with and without slide shutter) until 5.4 l has been taken in. After 2.7 l has been registered, the EGS valve is also opened until the total desired intake quantity has been reached.

Warning!
If the flow meter is defective, the EGS valve is not activated.

U5. Y5, EGS valve:
The EGS valve is activated for 60 sec.

Technical Information

U6. M6, circulation pump switched winding relay:
The circulation pump with switched auxiliary winding is activated. With a controlled circulation pump, the activation is at the maximum speed for controlled operation. The circulation pump is activated for 30 sec., but the auxiliary winding relay is only activated during the first 15 sec

Note
During the period when the auxiliary winding relay is activated, a higher circulation pump current of approx. 0.9 A flows. Afterwards the current is approx. 0.16 A.

U7. Vacant

U8. Vacant

U9. Vacant

U10. Y50, combination dispenser:
The combination dispenser is activated with pulsed operation for 60 sec. The pulse rhythm throughout the test period is 10 sec. on / 10 sec. off.

U11. Y38, Y2, Y5,…, reactivation sequence (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on/2 sec. off). The water inlet valve with EGS valve is then activated until 250 ml has been reached or 60 sec. has elapsed. The reactivation valve is then activated for 120 sec. Following this the water inlet valve and the drain pump, which begins with pulsed priming (2 sec. on/2 sec. off), are operated together for 60sec.

Starting with software version ID 984 the reactivation component test operates as follows:

At the start of the mini-program the drain pump M8, water inlet valve Y2 and EGS valve Y5 are activated at the same time. M8 pumps water for 30 sec. and is primed with pulsed priming (2 sec. on/2 sec. off). Y2 and Y5 are switched off when 250 ml has been reached or 60 sec. has elapsed. The reactivation valve Y38 is then activated for 150 sec. following this, the water inlet valve and the drain pump, which begins without pulsed priming (2 sec. on/2 sec. off), are operated together for 60 sec.

U12. Vacant

U13. Y38, reactivation valve:
The reactivation valve is activated for 60 sec.

U14. M2 Fan:
The fan is activated for 60 sec.

6.3 Inspira Series

6.3.1 Inspira Series - G2140 & G2150

6.3.1.1 G2140 / G2150 - Programming Mode

Accessing

1. Press and hold the Start/Stop button.
2. Switch on the machine.
3. Release the Start/Stop button.
4. Immediately press and release the Start/Stop button 5 times and at the 5th time hold until the Start/Stop LED flashes rapidly.
5. Release the Start/Stop button

If the Start/Stop LED does not flash, repeat the procedure.

Acknowledgement indicator

Successful accessing of the Service Dept. programming mode is indicated by a rapid flashing Start/Stop LED (5 Hz)

Options

Refer to Tables: 6-17 through 6-20.

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Display	Flashing Rhythm of Sani-Wash Lt.		
Long	**Short**	Pos. 0: Software version ID check	Do not press the **Program** button. The **Rinse & Hold** LED is off.	The Rinse LED is off or flashes. Shows the software version ID No., e.g. –769.	**Long**	**Short**	**Display**
-	-				-	-	ID No.
Long	**Short**	Pos. 1: Reset	Press the **Program** button once. The **Rinse & Hold** LED flashes once rapidly intermittently. Press the **Start/Stop** button to reset all standard settings.	The Rinse LED is off or flashes. This programmable function can be used to reset all modifiable parameters (both customer and service programming) to the standard settings. The display shows P and a digit alternately: P0 = Non-standard settings have been made; P1 = All settings reset to standard settings or no modifications have been made**.**	**Long**	**Short**	**Display**
-	1				-	-	P0
					-	1	P1
Long	**Short**	Pos 3: Dispensed rinse aid quantity setting	Press the **Program** button 3 times. The **Rinse & Hold** LED flashes 3 times rapidly intermittently. Press the **Start/Stop** button as appropriate to make the desired setting.	The Rinse LED is off or flashes: P3 (standard setting) indicates a dispensed quantity of 3 ml. Setting range: 0 ml – 6 ml.	**Long**	**Short**	**Display**
-	3				-	0	P0 (0 ml)
					1	1	P1 (1 ml)
					2	2	P2 (2ml)
					3	**3**	**P3 (3 ml)**
					4	4	P4 (4 ml)
					5	5	P5 (5 ml)
					6	6	P6 (6ml)

Table 6-17: G2140 Program Mode Options (Continued on Table 6-18)

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Display	Flashing Rhythm of Sani-Wash Lt.		
Long	**Short**	Pos. 12: Resetting standard settings *1	Press the **Program** button 12 times. The **Rinse & Hold** LED flashes once slowly and 2 times rapidly intermittently. Press the **Start/Stop** button to reset all standard settings.	The Rinse LED is off or flashes. This programmable function can be used to reset all parameters that can be modified by the customer to the standard settings: P0 = Non-standard settings have been made; P1 = All settings reset to standard settings or no modifications have been made.	**Long**	**Short**	**Display**
1	2				-	-	P0
					-	1	P1
Long	**Short**	Pos. 20: Wash temperature modification (from software version ID No. –984)	Press the Program button 20 times. The Rinse & Hold LED flashes 2 times slowly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. Setting options: P0 = Standard setting; P1 = Wash temperature increased. Due to a program-dependent running time extension, the wash temperature will be increased.	**Long**	**Short**	**Display**
2	-				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 22: Program running time reduction (from software version ID No. –984)	Press the Program button 22 times. The Rinse & Hold LED flashes 2 times slowly and 2 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes: P0 = Standard setting; P1 = Program running time reduction.	**Long**	**Short**	**Display**
2	2				**-**	**-**	**P0**
					-	1	P1

Table 6-18: G2140 Program Mode Options (Cont. from Table 6-17) (Cont. on Table 6-19)

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Display	Flashing Rhythm of Sani-Wash Lt.		
Long	**Short**	Pos. 23: Water quantity normal / increased (from software version ID No. –876)	Press the Program button 22 times. The Rinse & Hold LED flashes 2 times slowly and 2 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately: P0 = Normal water quantity (standard setting); P1 = Increased water quantity.	**Long**	**Short**	**Display**
2	3				**-**	**-**	**P0**
					-	-	P1
Long	**Short**	Pos. 26: Second interim rinse selection (from software version ID No. –984)	Press the Program button 26 times. The Rinse & Hold LED flashes 2 times slowly and 6 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. Setting options: P0 = Standard setting; P1 = With second interim rinse.	**Long**	**Short**	**Display**
2	6				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 27: Extended drying time (from software version ID no.-818)	Press the Program button 27 times. The Rinse & Hold LED flashes 2 times slowly and 7 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. Setting options: P0 = Normal drying time; P1 = Extended drying time.	**Long**	**Short**	**Display**
2	7				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 36: Machine height setting (from software version ID no.-818) *2	Press the Program button 36 times. The Rinse & Hold LED flashes 3 times slowly and 6 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. Setting options: P0 = Normal machine height (G1xxx); P1 = XXL model (G2xxx).	**Long**	**Short**	**Display**
3	6				-	-	P0
					-	1	P1

Table 6-19: G2140 Program Mode Options (Cont. from Table 6-18) (Cont. on Table 6-20)

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Display	Flashing Rhythm of Sani-Wash Lt.		
Long	**Short**	Pos. 38: Model variant setting (from software version ID no. –818) *2	Press the Program button 38 times. The Rinse & Hold LED flashes 3 times slowly and 8 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. Individual setting possibilities depend on model and whether a circulation pump with slide shutter (WAW) and sensor softener (SEH) are fitted as follows: P0 = G12xx, G22xx (without WAW, without SEH); P4 = Australian version G12xx, G22xx (with WAW, without SEH).	**Long**	**Short**	**Display**
3	8				**-**	**-**	**P0**
					-	1	P4
Long	**Short**	Pos. 39: Country variant setting (from software version ID no. –818) *2	Press the Program button 39 times. The Rinse & Hold LED flashes 3 times slowly and 9 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The following country versions can be set: P1 = EUR (Europe); P2 = AUS (Australia); P3 = USA, P4 = JPN (Japan), P5 = I/E (Italy/Spain), P6 = SER (Southern Europe) *3	**Long**	**Short**	**Display**
3	9				-	1	P1
					-	2	P2
					-	**3**	**P3**
					-	4	P4
					-	5	P5
					-	6	P6

Table 6-20: G2140 Program Mode Options (Continued from Table 6-19)

Warning!
Do not change settings in Position 36, 38 or 39. Any changes made will affect the operation of the dishwasher.

*1 On models with software version ID no. 769, the “Resetting standard settings” function is at Pos.19.

*2 If the electronic unit is replaced during service work, it must be programmed as follows: First set the country variant and model variant, then switch off the unit, repeat the accessing procedure and set the machine height. Then the on-site water hardness must be set.

*3 The SER variant includes the following countries: Portugal, France, Netherlands, Belgium and Great Britain.

Save and quit
Switch off the unit.

6.3.1.2 G2140 / G2150 Service Mode

Accessing

1. Press and hold the Start/Stop button.
2. Switch on the machine.
3. Release the Start/Stop button.
4. Immediately press and release the Start/Stop button 3 times and at the 3rd time hold it until the Start/Stop LED flashes.
5. Release the Start/ Stop button

If the Start/Stop LED has not started to flash within approx. 4 sec., the accessing procedure must be repeated.

Acknowledgement Indicator

Successful accessing of the Service mode is indicated by a slow flashing Start/Stop LED (1 Hz).

Options

Refer to Tables: 6-21 through 6-22.

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Display	Flashing Rhythm of Rinse LED		
Long	**Short**	Pos. 0: Software version ID check	Do not press the Program button. The Rinse & Hold LED is off.	The Rinse LED is off. Shows the software version ID No., e.g. -769	**Long**	**Short**	**Display**
-	-				-	-	-
Long	**Short**	Pos. 1: Fault memory display and deletion	Press the Program button once. The Rinse & Hold LED flashes once rapidly intermittently. Press the Start/Stop button. Press it again to display fault codes that may have been saved. To delete the fault memory, press the Start/Stop button again and hold it for 4 sec.	The Rinse LED is off or flashes to show the fault code number alternately see 6.7, Fault code summary. If the fault memory is empty, the Rinse LED is off.	**Long**	**Short**	**Display**
-	1				-	-	F0
					-	1	F1
					-	2	F2
					1	1	F11
					1	2	F12
					1	3	F13
					1	4	F14
					1	8	F18
					1	9	F19
					2	4	F24
					2	5	F25
					2	6	F26
					4	-	F40
					5	1	F51
					6	9	F69
					7	-	F70
					8	8	F88

Table 6-21: G2140 Service Mode Options (Continued on Table 6-22).

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Display	Flashing Rhythm of Rinse LED		
Long	**Short**	Pos.2: Component test	Press the Program button 2 times. The Rinse & Hold LED flashes 2 times rapidly intermittently. Press the Start/Stop button. Press it again to activate the next component.	The Rinse LED shows which component is being tested: For example if the drain pump M8 is being tested, the Rinse LED flashes 3x briefly intermittently. For the test sequence and background information about individual components and their activation, see 6.3.1.3, Component test.	**Long**	**Short**	**Display**
-	2				-	-	U0
					-	1	U1
					-	2	U2
					-	3	U3
					-	4	U4
					-	5	U5
					-	6	U6
					-	7	U7
					-	8	U8
					-	9	U9
					1	0	U10
					1	1	U11
					1	2	U12
					1	3	U13
					1	4	U14
Long	**Short**	Pos 4: Operating hours check	Press the Program button 3 times. The Rinse & Hold LED flashes 3 times rapidly intermittently.	The Rinse LED shows the number of operating hours as follows: If the machine has run for 74 hours, the Rinse LED flashes 7x long and 4x briefly intermittently.	**Long**	**Short**	**Display**
-	3				-	-	-
Long	**Short**	Pos. 5: LED test	Press the Program button 4 times. The Rinse & Hold LED flashes 4 times rapidly intermittently. Press the Start/Stop button once.	All LEDs are lit.	**Long**	**Short**	**Display**
-	4				-	-	-

Table 6-22: G2140 Service Mode Options (Continued from Table 6-21)

Save and quit
Switch off the unit.

6.3.1.3 G2140 / G2150 Component Test - Information

After selecting the service mode and successfully accessing the component test program, individual electrical components can be activated via the program button (Start/Stop for Integrated models). During this procedure, certain components can only be activated via special mini-programs.

Test sequence and background information:

U1. R1, Y2, M6,…, wash sequence with heating (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. At the same time the water inlet valve is activated, the slide shutter is set to the middle spray arm position. After 2.7 l has been registered, the EGS (electronically controlled water softener) valve is also opened until the total desired intake quantity has been reached. The circulation pump with switched auxiliary winding is then operated. At the same time the slide shutter is activated with its setting alternating at 15 sec. intervals. After an additional 60 sec., the heating relay is switched on for 300 sec. and the water is heated to 122°F. The mini-program ends with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off).

Note
The mini-program does not include any fault testing function.

U2. 1K1, heating relay:
The heating relay is activated for 60 sec

U3. M8, drain pump:
The drain pump is activated for 60 sec.

U4. Y2, Y5, water inlet valves with EGS (electronically controlled water softener) valve (mini-program):

The water inlet valve is activated (on models with and without slide shutter) until 5.4 l has been taken in. After 2.7 l has been registered, the EGS valve is also opened until the total desired intake quantity has been reached.

Warning!
If the flow meter is defective, the EGS valve is not activated.

U5. Y5, EGS valve:
The EGS valve is activated for 60 sec.

U6. M6, circulation pump switched winding relay:
The circulation pump with switched auxiliary winding is activated. With a controlled circulation pump, the activation is at the maximum speed for controlled operation. The circulation pump is activated for 30 sec., but the auxiliary winding relay is only activated during the first 15 sec

Note
During the period when the auxiliary winding relay is activated, a higher circulation pump current of approx. 0.9 A flows. Afterwards the current is approx. 0.16 A.

U7. Vacant

U8. Vacant

U9. Vacant

U10. Y50, combination dispenser:
The combination dispenser is activated with pulsed operation for 60 sec. The pulse rhythm throughout the test period is 10 sec. on / 10 sec. off.

U11. Y38, Y2, Y5,…, reactivation sequence (mini-program):This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on/2 sec. off). The water inlet valve with EGS valve is then activated until 250 ml has been reached or 60 sec. has elapsed. The reactivation valve is then activated for 120 sec. Following this the water inlet valve and the drain pump, which begins with pulsed priming (2 sec. on/2 sec. off), are operated together for 60sec.

Starting with software version ID 984 the reactivation component test operates as follows:

At the start of the mini-program the drain pump M8, water inlet valve Y2 and EGS valve Y5 are activated at the same time. M8 pumps water for 30 sec. and is primed with pulsed priming (2 sec. on/2 sec. off). Y2 and Y5 are switched off when 250 ml has been reached or 60 sec. has elapsed. The reactivation valve Y38 is then activated for 150 sec. following this, the water inlet valve and the drain pump, which begins without pulsed priming (2 sec. on/2 sec. off), are operated together for 60 sec.

U12. Vacant

U13. Y38, reactivation valve:
The reactivation valve is activated for 60 sec.

U14. Vacant

6.3.2 Inspira Series - G1180 & G2180

6.3.2.1 G1180 / G2180 - Programming Mode

Initial requirements

3. Open the door.
4. Switch off the machine.

Accessing

1. Press and hold the program button.
2. Switch on the machine.
3. Release the program button.
4. Immediately press and release the program button 5 times and at the 5th time hold until the Rinse & Hold LED flashes rapidly.
5. Release the program button

If the Rinse & Hold LED has not started to flash within approx. 4 sec., the accessing procedure must be repeated.

Acknowledgement indicator

Successful accessing of the Service Dept. programming mode is indicated by a rapid flashing Rinse & Hold LED (5 Hz)

Options

Refer to Tables: 6-23 through 6-28.

Note

Upon accessing the programming mode, to navigate between the various functions and making changes within them you must do the following:

1. To navigate the Functions insure the **Intake/Drain** Lt. is solid. If not, hold the **Program** button until the **Intake/Drain** Lt. becomes a solid light. Now the **Program** button can be used to navigate the Functions bar.

2. To make setting changes within each Function, hold the **Program** button until you see a blinking light from the **Intake/Drain** Lt. Now you can use the **Program** button to make your setting changes within each Function. The **Sani-Wash** Lt. will indicate what the setting is for each Function.

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Indication	Flashing Rhythm of SaniWash LED		
Long	**Short**	Pos. 0: Software version ID check	Do not press the Program button. The Intake/Drain LED is off.	The Sani-Wash LED is off or flashes. Shows the software version ID No., e.g. -769	**Long**	**Short**	**Display**
-	-				-	-	ID No.
Long	**Short**	Pos. 1: Reset	Press the **Program** button 1x. To reset all parameters to the delivery condition, press the **Program** button and hold until the **Intake/Drain** LED flashes. Then press the **Program** button briefly *2	The **Intake/Drain** LED flashes 1x briefly intermittently. With this programming function, all parameters can be reset to delivery condition. If the **SaniWash** LED is off, the values do not correspond to the delivery condition. If the **SaniWash** LED flashes, all values are as in the delivery condition.	**Long**	**Short**	**Display**
-	1				**-**	**-**	P0
					-	1	P1
-	2	Pos. 2: Set the water hardness	Press the **Program** button 2x. To modify the water hardness setting, press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 2x briefly intermittently. The current setting can be seen from the flashing rhythm of the **SaniWash** LED. If the LED flashes 4x briefly intermittently, this indicates a factory setting of 15-19 gr/gal.	**Long**	**Short**	**gr/gal**
					-	1	1-5
					-	2	6-9
					-	3	10-14
					-	**4**	**15-19**
					-	5	20-25
					-	6	26-31
					-	7	33-38
					-	8	39-45
					-	9	46-63
					1	-	64-88

Table 6-23: G1180 / G2180 Programming Mode Options (Continued on Table 6-24)

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Indication	Flashing Rhythm of SaniWash LED		
Long	**Short**	Pos 3: Set amount of rinse aid dispensed	Press the Program button 3 times.	The Intake/Drain LED flashes 3x rapidly intermittently.	**Long**	**Short**	**Display**
					-	-	0ml
					-	1	1ml
					-	2	2ml
			To modify the dispensing amount, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then use the **Program** button to enter the desired setting changes. *2	The current setting can be seen from the flashing rhythm of the **SaniWash** LED. If he LED flashes 3x briefly intermittently, this indicates a factory setting of 3ml. Setting range: 0-6 ml.	**-**	**3**	**3ml**
-	3				-	4	4ml
					-	5	5ml
					-	6	6ml
Long	**Short**	Pos 4: Buzzer on/off	Press the **Program** button 4x	The **Intake/Drain** LED flashes 4x rapidly intermittently.	**Long**	**Short**	**Display**
			To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	**SaniWash** LED off = Buzzer is actuvated (factory setting). **SaniWash** LED flashes = Buzzer is deactivated.	**-**	**-**	**P0**
-	4				-	1	P1

Table 6-24: G1180 / G2180 Programming Mode Options (Cont. from Table 6-23) (Cont. on Table 6-25)

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Indication	Flashing Rhythm of SaniWash LED		
Long	**Short**	Pos. 12: Reset to factory setting	Press the **Program** button 12x To reset all parameters to factory setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 1x long and 2x briefly intermittently. With this programming function, all parameters that can be modified by the customer can be reset to the factory setting. If the **SaniWash** LED is off, the values are not at the factory setting. If the **SaniWash** LED flashes, all values correspond to the factory setting.	**Long**	**Short**	**Display**
1	2				-	-	P0
					-	**1**	**P1**
Long	**Short**	Pos. 20: Set the wash temperature	Press the **Program** button 20x To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 2x long intermittently. The **SaniWash** LED is off = normal wash temperature; the **SaniWash** flashes = increased wash temperature with a resulting running time extension.	**Long**	**Short**	**Display**
2	-				**-**	**-**	**P0**
					-	1	P1

Table 6-25: G1180 / G2180 Programming Mode Options (Cont. from Table 6-24) (Cont. on Table 6-26)

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Indication	Flashing Rhythm of SaniWash LED		
Long	**Short**	Pos. 22: Program running time reduction	Press the **Program** button 22x	The **Intake/Drain** LED flashes 2x long and 2x briefly intermittently.	**Long**	**Short**	**Display**
					-	**-**	**P0**
2	2		To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **SaniWash** LED is off = normal program cycle (factory setting); the **SaniWash** LED flashes = shortened program cycle. Reduction in running time due to a decrease in temperature and/or the removal of hold times.	-	1	P1
Long	**Short**	Pos. 23: Water quantity normal / increased	Press the **Program** button 23x.	The **Intake/Drain** LED flashes 2x long and 3x briefly intermittently.	**Long**	**Short**	**Display**
			To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **SaniWash** LED is off = normal water volume (factory setting); the **SaniWash** LED flashes = increased water volume.	**-**	**-**	**P0**
2	3				-	1	P1

Table 6-26: G1180 / G2180 Programming Mode Options (Cont. from Table 6-25) (Cont. on Table 6-27)

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Indication	Flashing Rhythm of SaniWash LED		
Long	**Short**	Pos. 26: Add second interim rinse	Press the **Program** button 26x. To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 2x long and 6x briefly intermittently. The **SaniWash** LED is off = program cycle per factory setting; The **SaniWash** LED flashes = second interim rinse is added.	**Long**	**Short**	**Display**
2	6				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 27: Extended drying time	Press the **Program** button 27x To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 2x long and 7x briefly intermittently. The **SaniWash** LED if off = normal drying (factory setting); the **SaniWash** LED flashes = enhanced drying.	**Long**	**Short**	**Display**
2	7				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 36: Machine height setting *1	Press the **Program** button 36x. To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 3x long and 6x briefly intermittently. The **SaniWash** LED is off = normal machine height (G1xxx). The **SaniWash** LED flashes = XXL units (G2xxx).	**Long**	**Short**	**Display**
3	6				-	-	P0
					-	1	P1

Table 6-27: G1180 / G2180 Programming Mode Options (Cont. from Table 6-26) (Cont. on Table 6-28)

Flashing Rhythm of Intake/Drain Lt.		Function	Programming	Indication	Flashing Rhythm of SaniWash LED		
Long	**Short**	Pos. 38: Model variant setting *1	Press the **Program** button 38x. To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The **Intake/Drain** LED flashes 3x long and 8x briefly intermittently. The **SaniWash** LED is off = Gx18x and Gx171; the **SaniWash** LED flashes = Gx170	**Long**	**Short**	**Display**
3	8				-	-	P0
					-	1	P1
Long	**Short**	Pos. 39: Country variant setting *1	Press the **Program** button 38x.	The **Intake/Drain** LED flashes 3x long and 8x briefly intermittently.	**Long**	**Short**	**Display**
3	9				-	1	EUR
					-	2	AUS
			To change the setting, press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button to enter the desired setting changes. *2	The flashing rhythm of the **SaniWash** LED shows which country variant is set: 1x = Europe; 2x = Australia; 3x = USA; 4x = Japan, 5x = Italy/Spain, 6x = Southern Europe. *3.	**-**	**3**	**USA**
					-	4	JPN
					-	5	IT/SP
					-	6	S/EUR

Table 6-28: G1180 / G2180 Programming Mode Options (Continued from Table 6-27)

*1 If the electronic unit is exchanged during service work, it must be programmed as follows: First set the country variant and model variant, then switch off the unit, repeat the accessing procedure and set the machine height.

*2 After the changes are made, hold the program button until the Intake/Drain LED is solid.

*3 The variant Southern Europe covers the following countries: Portugal, France, The Netherlands, Belgium and Great Britain.

Save and quit
Switch off the unit.

6.3.2.2 G1180 / G2180 - Service Mode

Initial requirements

3. Open the door.
4. Switch off the machine.

Accessing

1. Press and hold the program button.
2. Switch on the machine.
3. Release the program button.
4. Immediately press and release the program button 3 times and at the 3rd time hold until the Rinse & Hold LED flashes rapidly.
5. Release the program button

If the Rinse & Hold LED has not started to flash within approx. 4 sec., the accessing procedure must be repeated.

Acknowledgement indicator

Successful accessing of the Service Dept. programming mode is indicated by a rapid flashing Rinse & Hold LED (5 Hz)

Options

Refer to Tables: 6-29 through 6-30.

Note

Upon accessing the programming mode, to navigate between the various functions and making changes within them you must do the following:

1. To navigate the Functions insure the **Intake/Drain** Lt. is solid. If not, hold the **Program** button until the **Intake/Drain** Lt. becomes a solid light. Now the **Program** button can be used to navigate the Functions bar.

2. To make setting changes within each Function, hold the **Program** button until you see a blinking light from the **Intake/Drain** Lt. Now you can use the **Program** button to make your setting changes within each Function. The **Sani-Wash** Lt. will indicate what the setting is for each Function.

Flashing rhythm of **Intake/Drain** LED		**Function**	**Programming**	**Indication**	Flashing rhythm of **SaniWash** LED		
Long	**Short**	Pos. 0: Software version ID check	Do not press the **Program** button. The **Intake/Drain** LED is off.	The **Sani-Wash** LED is off or flashes. Shows the software version ID No., e.g. -769	**Long**	**Short**	
-	-				-	-	ID No.
-	1	Pos. 1: Fault memory display and deletion	Press the **Program** button 1x. If the fault is indicated in the **SaniWash** LED, check if additional faults are registered. Press the **Program** button and hold it until the **Intake/Drain** LED flashes. Then press the **Program** button briefly. *1	The **Intake/Drain** LED flashes 1x. If faults are saved into memory, these are indicated via the flashing rhythm of the **SaniWash** LED. Refer to 6.7 Fault code summary.	-	-	F0
					-	1	F1
					-	2	F2
					1	1	F11
					1	2	F12
					1	3	F13
					1	4	F14
					1	8	F18
					1	9	F19
					2	4	F24
					2	5	F25
					2	6	F26
			To delete the fault memory, press the **Program** button and hold until the **Intake/Drain** LED flashes. Then press the **Program** button until the **SaniWash** LED goes out.	The **SaniWash** LED is off = F0 (no faults).	4	-	F40
					5	1	F51
					5	2	F52
					6	9	F69
					7	-	F70
					8	8	F88
-	2	Pos.2: Component test	Press the **Program** button 2x.	The **Intake/Drain** LED flashes 2x.	-	-	U0
			To start the component test, press the **Program** button and hold until the **Intake/Drain** LED flashes. Then press the **Program** button briefly. Press the **Program** button again to access each of the following components. *1	The flashing rhythm of the **SaniWash** LED indicates which component is currently accessed. For the sequence of component testing as well as backgraound information and access procedures, refer to 6.3.2.3 Component test.	-	1	U1
					-	2	U2
					-	3	U3
					-	4	U4
					-	5	U5
					-	6	U6
					-	7	U7
					-	8	U8
					-	9	U9
					1	0	U10
					1	1	U11
					1	2	U12
					1	3	U13
					1	4	U14

Table 6-29: G1180 / G2180 Service Mode (Continued on Table 6-30)

Flashing rhythm of **Intake/Drain** LED		**Function**	**Programming**	**Indication**	Flashing rhythm of **SaniWash** LED		
Long	**Short**				**Long**	**Short**	**Display**
-	4	Pos 4: Operating hours check	Press the **Program** button 3x. To check the operating hours, press the **Program** button and hold until the **Intake/Drain** LED flashes. Then press the **Program** button briefly. *1	The **Intake/Drain** LED flashes 3x. The flashing rhythm of the **SaniWash** LED indicates the saved operating hours. Each long flash of the **SaniWash** LED represents 1000 hours and each short flash 100 hours.	-	-	-
-	5	Pos. 5: Control Panel LED test	Press the **Program** button 4x. To start the control panel test: LED, press the **Program** button and hold until the **Intake/Drain** LED flashes. Then press the **Program** button briefly. *1	The **Intake/Drain** LED flashes 4x. All LEDs are lit.	-	-	-
-	6	Pos. 6: Control Panel Buzzer Test	Press the **Program** button 5x. To start the control panel test: Buzzer, press the **Program** button and hold until the **Intake/Drain** LED flashes. Then press the **Program** button briefly. *1	The **Intake/Drain** LED flashes 5x. Buzzer on.	-	-	-

Table 6-30: G1180 / G2180 Service Mode (Continued from Table 6-29)

*1 To make the desired setting adjustments. Hold the **Program** button until the **Intake/Drain** Lt. is blinking, then use the **Program** button to make your setting changes. Once done, hold the **Program** button until the **Intake/Drain** Lt. is solid again.

Save and quit

Switch off the unit.

6.3.2.3 G1180 / G2180 – Component Test

After selecting the service mode and successfully accessing the component test program, individual electrical components can be activated via the program button (Start/Stop for Integrated models). During this procedure, certain components can only be activated via special mini-programs.

Test sequence and background information:

U1. R1, Y2, M6,…, wash sequence with heating (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. At the same time the water inlet valve is activated, the slide shutter is set to the middle spray arm position. After 2.7 l has been registered, the EGS (electronically controlled water softener) valve is also opened until the total desired intake quantity has been reached. The circulation pump with switched auxiliary winding is then operated. At the same time the slide shutter is activated with its setting alternating at 15 sec. intervals. After an additional 60 sec., the heating relay is switched on for 300 sec. and the water is heated to 122°F. The mini-program ends with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off).

Note
The mini-program does not include any fault testing function.

U2. 1K1, heating relay:
The heating relay is activated for 60 sec

U3. M8, drain pump:
The drain pump is activated for 60 sec.

U4. Y2, Y5, water inlet valves with EGS (electronically controlled water softener) valve (mini-program):

The water inlet valve is activated (on models with and without slide shutter) until 5.4 l has been taken in. After 2.7 l has been registered, the EGS valve is also opened until the total desired intake quantity has been reached.

Warning!
If the flow meter is defective, the EGS valve is not activated.

U5. Y5, EGS valve:
The EGS valve is activated for 60 sec.

U6. M6, circulation pump switched winding relay:
The circulation pump with switched auxiliary winding is activated. With a controlled circulation pump, the activation is at the maximum speed for controlled operation. The circulation pump is activated for 30 sec., but the auxiliary winding relay is only activated during the first 15 sec.

Note
During the period when the auxiliary winding relay is activated, a higher circulation pump current of approx. 0.9 A flows. Afterwards the current is approx. 0.16 A.

U7. Vacant

U8. Vacant

U9. Vacant

U10. Y50, combination dispenser:
The combination dispenser is activated with pulsed operation for 60 sec. The pulse rhythm throughout the test period is 10 sec. on / 10 sec. off.

U11. Y38, Y2, Y5,…, reactivation sequence (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on/2 sec. off). The water inlet valve with EGS valve is then activated until 250 ml has been reached or 60 sec. has elapsed. The reactivation valve is then activated for 120 sec. Following this the water inlet valve and the drain pump, which begins with pulsed priming (2 sec. on/2 sec. off), are operated together for 60sec.

Starting with software version ID 984 the reactivation component test operates as follows:

At the start of the mini-program the drain pump M8, water inlet valve Y2 and EGS valve Y5 are activated at the same time. M8 pumps water for 30 sec. and is primed with pulsed priming (2 sec. on/2 sec. off). Y2 and Y5 are switched off when 250 ml has been reached or 60 sec. has elapsed. The reactivation valve Y38 is then activated for 150 sec. following this, the water inlet valve and the drain pump, which begins without pulsed priming (2 sec. on/2 sec. off), are operated together for 60 sec.

U12. Vacant

U13. Y38, reactivation valve:
The reactivation valve is activated for 60 sec.

U14. M2 Fan:
The fan is activated for 60 sec.

6.4 Optima Series

6.4.1 Optima Series – G2420 & G2430

6.4.1.1 G2420 / G2430 – Programming Mode

Initial requirements
1. Close the door.
2. Switch off the machine.

Accessing
1. Press and hold the **Start/Stop** button.
2. Switch on the machine.
3. Release the **Start/Stop** button.
4. Wait for dot in display, then immediately press and release the **Start/Stop** button 5 times and on the 5th time hold until the **Start/Stop** LED flashes rapidly.
5. Release the **Start/Stop** button

If the Start/Stop LED does not flash, repeat the procedure.

Acknowledgement Indicator
Successful accessing of the Service Dept. programming mode is indicated by a rapid flashing **Start/Stop** LED (5 Hz)

Options
Refer to Tables: 6-31 through 6-35.

Flashing Rhythm of Delay Start LED		Function	Programming	Display	Flashing Rhythm of Rinse LED		
Long	**Short**	Pos. 0: Software version ID check	Do not press the Delay start button. The Delay start LED is off.	The Rinse LED is off or flashes. The display shows the software version ID No., e.g. –769.	**Long**	**Short**	**Display**
-	-				-	-	ID No.
Long	**Short**	Pos. 1: Reset	Press the Delay start button once. The Delay start LED flashes once rapidly intermittently. Press the Start/Stop button to reset all standard settings.	The Rinse LED is off or flashes. This programmable function can be used to reset all modifiable parameters to the standard settings. The display shows P and a digit alternately: P0 = Non-standard settings have been made; P1 = All settings reset to standard settings or no modifications have been made.	**Long**	**Short**	**Display**
-	1				-	-	P0
					-	1	P1
Long	**Short**	Pos.2: Sensor softener activation/ Water hardness setting*1	Press the Delay start button 2 times. The Delay start LED flashes 2 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and the set value alternately. Setting range: P0 = Sensor softener active.P1 – P4 = Softener off. P5 to P70 = Water hardness, see Table 6-2.	**Long**	**Short**	**Display**
-	2				-	-	P0
					-	1	P1
					-	2	P2
					-	3	P3
					-	4	P4
					1	9	P19
Long	**Short**	Pos 3: Dispensed rinse aid quantity setting	Press the Delay start button 3 times. The Delay start LED flashes 3 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately: e.g. P3 (standard setting) indicates a dispensed quantity of 3 ml. Setting range: 0 ml – 6 ml.	**Long**	**Short**	**Display**
-	3				-	-	P0 (0ml)
					-	1	P1 (1ml)
					-	2	P2 (2ml)
					-	**3**	**P3 (3ml)**
					-	4	P4 (4ml)
					-	5	P5 (5ml)
					-	6	P6 (ml)

Table 6-31: G2420 / G2430 Programming Mode Options (Continued on Table 6-32)

Flashing Rhythm of Delay Start LED		Function	Programming	Display	Flashing Rhythm of Rinse LED		
Long	**Short**	Pos. 5: Sensor wash program modification (from software version ID No. 984)	Press the Delay start button 5 times. The Delay start LED flashes 5 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately: P0 = Normal program sequence (standard setting); P1 = Modified program sequence. This is used to adjust the Sensor wash program parameters so it can be used to wash items with stubborn stains even if the overall level of soiling is otherwise low.	**Long**	**Short**	**Display**
-	5				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 12: Resetting standard settings	Press the Delay start button 12 times. The Delay start LED flashes once slowly and 2 times rapidly intermittently. Press the Start/Stop button to reset all standard settings.	The Rinse LED is off or flashes. This programmable function can be used to reset all parameters that can be modified by the customer to the standard settings. This display shows P and a digit alternately: P0 = Non-standard settings have been made; P1 = All settings reset to standard settings or no modifications have been made.	**Long**	**Short**	**Display**
1	2				-	-	P0
					-	1	P1
Long	**Short**	Pos. 20: Wash temperature modification (from software version ID No. –984)	Press the Delay start button 20 times. The Delay start LED flashes 2 times slowly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately. Setting options: P0 = Standard setting; P1 = Wash temperature increased. Due to a program-dependent running time extension, the wash temperature will be increased.	**Long**	**Short**	**Display**
2	0				**-**	**-**	**P0**
					-	1	P1

Table 6-32: G2420 / G2430 Programming Mode Options (Cont. from Table 6-31) (Cont. on Table 6-33)

Flashing Rhythm of Delay Start LED		Function	Programming	Display	Flashing Rhythm of Rinse LED		
Long	**Short**	Pos. 21: Final rinse temperature modification (from software version ID No. –984)	Press the Delay start button 21 times. The Delay start LED flashes 2 times slowly and once rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately: P0 = Standard setting; P1 = Final rinse temperature increased. Due to a program-dependent running time extension, the final rinse temperature will be increased.	**Long**	**Short**	**Display**
2	1				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 22: Program running time reduction (from software version ID No. –984)	Press the Delay start button 22 times. The Delay start LED flashes 2 times slowly and 2 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately: P0 = Standard setting; P1 = Program running time reduction.	**Long**	**Short**	**Display**
2	2				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 23: Water quantity normal / increased (from software version ID No. –876)	When the decimal point in the display has switched off, press the Delay start button 23 times. The Delay start LED flashes 2 times slowly and 3 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately: P0 = Normal water quantity (standard setting); P1 = Increased water quantity.	**Long**	**Short**	**Display**
2	3				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 24: Soak activation / deactivation (from software version ID no.-818)	Press the Delay start button 24 times. The Delay start LED flashes 2 times slowly and 4 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately. Setting options: P0 = Soak not activated; P1 = Soak activated.	**Long**	**Short**	**Display**
2	4				-	-	P0
					-	1	P1

Table 6-33: G2420 / G2430 Programming Mode Options (Cont. from Table 6-32) (Cont. on Table 6-34)

Flashing Rhythm of Delay Start LED		Function	Programming	Display	Flashing Rhythm of Rinse LED		
Long	**Short**	Pos. 25: Pre-wash activation / deactivation (from software version ID no.-818)	Press the Delay start button 25 times. The Delay start LED flashes 2 times slowly and 5 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately. Setting options: P0 = Pre-wash not activated; P1 = Pre-wash activated.	**Long**	**Short**	**Display**
2	5				-	-	P0
					-	**1**	**P1**
Long	**Short**	Pos. 26: Second interim rinse selection (from software version ID No. –984)	Press the Delay start button 26 times. The Delay start LED flashes 2 times slowly and 6 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately. Setting options: P0 = Standard setting; P1 = With second interim rinse.	**Long**	**Short**	**Display**
2	6				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 27: Extended drying time (from software version ID no.-818)	Press the Delay start button 27 times. The Delay start LED flashes 2 times slowly and 7 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately. Setting options: P0 = Normal drying time; P1 = Extended drying time.	**Long**	**Short**	**Display**
2	7				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 36: Machine height setting (from software version ID no.-818) *1	Press the Delay start button 36 times. The Delay start LED flashes 3 times slowly and 6 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately. Setting options: P0 = Normal machine height (G1xxx); P1 = XXL model (G2xxx).	**Long**	**Short**	**Display**
3	6				**-**	**-**	**P0**
					-	1	P1

Table 6-34: G2420 / G2430 Programming Mode Options (Cont. from Table 6-33)
(Cont. on Table 6-35)

Flashing Rhythm of Delay Start LED		Function	Programming	Display	Flashing Rhythm of Rinse LED		
Long	**Short**	Pos. 38: Model variant setting (from software version ID no. –818) *1	Press the Delay start button 38 times. The Delay start LED flashes 3 times slowly and 8 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately. Individual setting possibilities depend on model and whether a circulation pump with slide shutter (WAW) and sensor softener (SEH) are fitted as follows: P3 = G14xx, G24xx (without WAW, with SEH).	**Long**	**Short**	**Display**
3	8				**-**	**3**	**P3**
Long	**Short**	Pos. 39: Country variant setting *1	Press the Delay start button 39 times. The Delay start LED flashes 3 times slowly and 9 times rapidly intermittently. Press the Start/Stop button as appropriate to make the desired setting.	The Rinse LED is off or flashes. The display shows P and a digit alternately. The following country versions can be set: P1 = EUR (Europe); P2 = AUS (Australia); P3 = USA, P4 = JPN (Japan), P5 = I/E (Italy/Spain), P6 = SER (Southern Europe) *2	**Long**	**Short**	**Display**
3	9				-	1	P1
					-	2	P2
					-	**3**	**P3**
					-	4	P4
					-	5	P5
					-	6	P6

Table 6-35: G2420 / G2430 Programming Mode Options (Continued from Table 6-34)

Warning
Do not change settings in Position 36, 38 or 39. Any changes made will affect the operation of the dishwasher.

*1 If the electronic unit is exchanged during service work, it must be programmed as follows: First set the country variant and model variant, then switch off the unit, repeat the accessing procedure and set the machine height. Then the on-site water hardness must be set.

*2 The SER variant includes the following countries: Portugal, France, Netherlands, Belgium and Great Britain.

Save and Quit
Switch off the unit

6.4.1.2 G2420 / G2430 - Service Mode Summary

Initial requirements
1. Close the door.
2. Switch off the machine.

Accessing
1. Press and hold the **Start/Stop** button.
2. Switch on the machine.
3. Release the **Start/Stop** button.
4. Immediately press and release the **Start/Stop** button 3 times and at the 3rd time hold until the **Start/Stop** LED flashes.
5. Release the **Start/ Stop** button

If the Start/Stop LED has not started to flash within approx. 4 sec., the accessing procedure must be repeated.

Acknowledgement Indicator
Successful accessing of the Service mode is indicated by a slow flashing **Start/Stop** LED (1 Hz).

Options
Refer to Tables: 6-36 through 6-37.

Flashing Rhythm of Delay Start LED		Function	Programming	Display	Flashing Rhythm of Rinse LED		
Long	**Short**	Pos. 0: Software version ID check	Do not press the **Delay start** button. The **Delay start** Led is off.	The **Rinse LED** is off. The Display shows the software version ID No., e.g. -769	**Long**	**Short**	**Display**
-	-				-	-	-
Long	**Short**	Pos. 1: Fault memory display and deletion	Press the **Delay start** button once. The **Delay start** LED flashes once rapidly intermittently. Press the **Start/Stop** button. Press it again to display fault codes that may have been saved. **To delete the fault memory**, press the **Start/Stop** button again and hold it for 4 sec.	The **Rinse** LED is off or flashes. The display shows **F** and a fault code number alternately, see 6.7, fault code summary. If the fault memory is empty, **F** and **0** are displayed alternately	**Long**	**Short**	**Display**
-	1				-	-	F0
					-	1	F1
					-	2	F2
					1	1	F11
					1	2	F12
					1	3	F13
					1	4	F14
					1	8	F18
					1	9	F19
					2	4	F24
					2	5	F25
					2	6	F26
					4	-	F40
					5	1	F51
					5	2	F52
					6	9	F69
					7	-	F70
					8	7	F87
					8	8	F88

Table 6-36: G2420 / G2430 Service Mode Options (Continued on Table 6-37)

Flashing Rhythm of Delay Start LED		Function	Programming	Display	Flashing Rhythm of Rinse LED		
Long	**Short**	Pos 2: Component test	Press the **Delay start** button 2 times. The LED flashes 2 times rapidly intermittently. Press the **Start/Stop** button. Press it again to activate the next component	The display shows which component is being tested. For example if the drain pump M8 is being tested, **U** and **3** are shown alternately. For the test sequence and background information about individual components and their activation, see 6.4.1.3, Component test.	**Long**	**Short**	**Display**
-	2				-	-	U0
					-	1	U1
					-	2	U2
					-	3	U3
					-	4	U4
					-	5	U5
					-	6	U6
					-	7	U7
					-	8	U8
					-	9	U9
					1	0	U10
					1	1	U11
					1	2	U12
					1	3	U13
					1	4	U14
Long	**Short**	Pos 4: Operating hours check	Press the **Delay start** button 3 times. The **Delay start** LED flashes 3 times rapidly intermittently.	The display shows the number of operating hours as follows: If the machine has run for 74 hours, **H**, **7** and **4** are displayed alternately.	**Long**	**Short**	**Display**
-	3				**-**	**-**	**-**
Long	**Short**	Pos. 5: LED test	Press the **Delay start** button 4 times. The **Delay start** LED flashes 4 times rapidly intermittently. Press the **Start/Stop** button once.	The display shows **6.1**: All LEDs are lit	**Long**	**Short**	**Display**
-	4				**-**	**-**	**-**

Table 6-37: G2420 / G2430 Service Mode Options (Continued from Table 6-36)

Save and Quit
Switch off the unit.

6.4.1.3 G2420 / G2430 Component Test

After selecting the service mode and successfully accessing the component test program, individual electrical components can be activated via the program button (Start/Stop for Integrated models). During this procedure, certain components can only be activated via special mini-programs.

Test sequence and background information:

U1. R1, Y2, M6,…, wash sequence with heating (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. At the same time the water inlet valve is activated, the slide shutter is set to the middle spray arm position. After 2.7 l has been registered, the EGS (electronically controlled water softener) valve is also opened until the total desired intake quantity has been reached. The circulation pump with switched auxiliary winding is then operated. At the same time the slide shutter is activated with its setting alternating at 15 sec. intervals. After a further 60 sec., the heating relay is switched on for 300 sec. and the water is heated to 122°F. The mini-program ends with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off).

Note
The mini-program does not include any fault testing function.

U2. 1K1, heating relay:
The heating relay is activated for 60 sec.

U3. M8, drain pump:
The drain pump is activated for 60 sec.

U4. Y2, Y5, water inlet valves with EGS (electronically controlled water softener) valve (mini-program):

The water inlet valve is activated (on models with and without slideshutter) until 5.4 l has been taken in. After 2.7 l has been registered, the EGS valve is also opened until the total desired water quantity has been reached

Warning!
If the flow meter is defective, the EGS valve is not activated.

U5. Y5, EGS valve:
The EGS valve is activated for 60 sec.

U6. M6, circulation pump switched winding relay:
The circulation pump with switched auxiliary winding is activated. With a controlled circulation pump, the activation is at the maximum speed for controlled operation. The circulation pump is activated for 30 sec., but the auxiliary winding relay is only activated during the first 15 sec.

Warning!
The circulation pump must not run for more than 30 sec. without water.

Note
During the period when the auxiliary winding relay is activated, a higher circulation pump current of approx. 0.9 A flows. Afterwards the current is approx. 0.16 A.

U7. Vacant

U8. Vacant

U9. Vacant

U10. Y50, combination dispenser:

The combination dispenser is activated with pulsed operation for 60 sec. The pulse rhythm throughout the test period is 10 sec. on / 10 sec. off.

U11. Y38, Y2, Y5,…, reactivation sequence (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on/2 sec. off). The water inlet valve with EGS valve is then activated until 250 ml has been reached or 60 sec. has elapsed. The reactivation valve is then activated for 120 sec. Following this the water inlet valve and the drain pump, which begins with pulsed priming (2 sec. on/2 sec. off), are operated together for 60sec.

Starting with software version ID 984 the reactivation component test operates as follows:

At the start of the mini-program the drain pump M8, water inlet valve Y2 and EGS valve Y5 are activated at the same time. M8 pumps water for 30 sec. and is primed with pulsed priming (2 sec. on/2 sec. off). Y2 and Y5 are switched off when 250 ml has been reached or 60 sec. has elapsed. The reactivation valve Y38 is then activated for 150 sec. following this, the water inlet valve and the drain pump, which begins without pulsed priming (2 sec. on/2 sec. off), are operated together for 60 sec.

U12. Vacant

U13. Y38, reactivation valve:
The reactivation valve is activated for 60 sec.

U14. M2, fan:
The fan is activated for 60 sec.

U15. Vacant

U16. Vacant

U17. Vacant

6.4.2 Optima Series – G1470 & G2470

6.4.2.1 G1470 / G2470 Programming Mode

Initial requirements
1. Open the door.
2. Switch off the machine.

Accessing
1. Press and hold the program button.
2. Switch on the machine.
3. Release the program button when the decimal point is in the display.
4. Immediately press and release the program button 5 times and at the 5th time hold until the Rinse & Hold LED flashes rapidly.
5. Release the program button.

If the Rinse & Hold LED has not started to flash within approx. 4 sec., the accessing procedure must be repeated.

Acknowledgement Indicator
Successful accessing of the Service Dept. programming mode is indicated by a rapid flashing Rinse & Hold LED (5 Hz)

Options
Refer to Tables: 6-38 through 6-42.

Flashing Rhythm of Gel LED		Function	Programming	Display	Flashing Rhythm of Sani-Wash LED		
Long	**Short**	Pos. 0: Software version ID check	Do not press the Gel button. The Gel LED is off.	The display shows the software version ID No., e.g. -769	**Long**	**Short**	**Display**
-	-				-	-	ID No.
Long	**Short**	Pos. 1: Reset	Press the Gel button once. The Gel LED flashes once rapidly intermittently. Press the program button as appropriate to make the desired setting.	This programmable function can be used to reset all modifiable parameters (both customer and service programming) to the standard settings. The display shows P and a digit alternately: P0 = Non-standard settings have been made; P1 = All settings reset to standard settings or no modifications have been made.	**Long**	**Short**	**Display**
-	1				-	-	P0
					-	**-**	P1
Long	**Short**	Pos.2: Sensor softener activation / Water hardness setting*1	Press the Gel button 2 times. The Gel LED flashes 2 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and the digit/s of the set value alternately. Setting range: P0 = Sensor Softener active. P1 to P4 = without softener; P5 to P70 = Water hardness, see Table 6-2.	**Long**	**Short**	**Display**
-	2				-	-	P0
					-	1	P1
					-	2	P2
					-	3	P3
					-	4	P4
					1	9	P19
					4	-	P40
Long	**Short**	Pos 3: Dispensed rinse aid quantity setting	Press the Gel button 3 times. The Gel LED flashes 3 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately: e.g. P3 (standard setting) indicates a dispensed quantity of 3 ml. Setting range: 0 ml – 6 ml.	**Long**	**Short**	**Display**
-	3				-	-	P0 (0ml)
					-	1	P1 (1ml)
					-	2	P2 (2ml)
					-	**3**	**P3 (3ml)**
					-	4	P4 (4ml)
					-	5	P5 (5ml)
					-	6	P6 (ml)

Table 6-38: G1470 / G2470 Programming Mode Options (Continued on Table 6-39)

Flashing Rhythm of Gel LED		Function	Programming	Display	Flashing Rhythm of Sani-Wash LED		
Long	**Short**	Pos 4: Buzzer on/off	Press the Gel button 4 times. The Gel LED flashes 4 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately: P0 = Buzzer off; P1 = Buzzer on.	**Long**	**Short**	**Display**
-	4				-	-	P0
					-	1	P1
Long	**Short**	Pos. 5: Sensor wash program modification (from software version ID No. 984)	Press the Gel button 5 times. The Gel LED flashes 5 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately: P0 = Normal program sequence (standard setting); P1 = Modified program sequence. This is used to adjust the Sensor wash program parameters so it can be used to wash items with stubborn stains even if the overall level of soiling is otherwise low.	**Long**	**Short**	**Display**
-	5				**-**	**-**	**P0**
					-	1	P1
Long	Short	Pos. 12: Resetting standard settings *2	Press the Gel button 12 times. The Gel LED flashes once slowly and 2 times rapidly intermittently. Press the program button to reset all standard settings.	The display shows P and a digit alternately: P0 = Normal program sequence (standard setting); P1 = Modified program sequence. This is used to adjust the Sensor wash program parameters so it can be used to wash items with stubborn stains even if the overall level of soiling is otherwise low.	Long	Short	Display
1	2				**-**	**-**	**P0**
					-	1	P1

Table 6-39: G1470 / G2470 Programming Mode Options (Cont. from Table 6-38) (Cont. on Table 6-40)

Flashing Rhythm of Gel LED		Function	Programming	Display	Flashing Rhythm of Sani-Wash LED		
Long	**Short**	Pos. 20: Wash temperature modification (from software version ID No. –984)	Press the Gel button 20 times. The Gel LED flashes 2 times slowly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately. Setting options: P0 = Standard setting; P1 = Wash temperature increased. Due to a program-dependent running time extension, the wash temperature will be increased.	**Long**	**Short**	**Display**
2	-				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 21: Final rinse temperature modification (from software version ID No. –984)	Press the Gel button 21 times. The Gel LED flashes 2 times slowly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately: P0 = Standard setting; P1 = Final rinse temperature increased. Due to a program-dependent running time extension, the final rinse temperature will be increased.	**Long**	**Short**	**Display**
2	1				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 22: Program running time reduction (from software version ID No. –984)	Press the Gel button 22 times. The Gel LED flashes 2 times slowly and 2 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately: P0 = Standard setting; P1 = Program running time reduction.	**Long**	**Short**	**Display**
2	2				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 23: Water quantity normal / increased (from software version ID No. –769 & 876)	Press the Gel button 23 times. The Gel LED flashes 2 times slowly and 3 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately: P0 = Normal water quantity (standard setting); P1 = Increased water quantity.	**Long**	**Short**	**Display**
2	3				**-**	**-**	**P0**
					-	-	P1

Table 6-40: G1470 / G2470 Programming Mode Options (Cont. from Table 6-39) (Cont. on Table 6-41)

Flashing Rhythm of Delay start LED		Function	Programming	Display	Flashing Rhythm of Rinse LED		
Long	**Short**	Pos. 24: Soak activation / deactivation (from software version ID no. 818)	Press the Gel button 24 times. The Gel LED flashes 2 times slowly and 4 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately. Setting options: P0 = Soak not activated; P1 = Soak activated.	**Long**	**Short**	**Display**
2	4				-	-	P0
					-	1	P1
Long	**Short**	Pos. 25: Pre-wash activation / deactivation (from software version ID no. 818)	Press the Gel button 25 times. The Gel LED flashes 2 times slowly and 5 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately. Setting options: P0 = Pre-wash not activated; P1 = Pre-wash activated.	**Long**	**Short**	**Display**
2	5				-	-	P0
					-	**1**	**P1**
Long	**Short**	Pos. 26: Second interim rinse selection (from software version ID No. –984)	Press the Gel button 26 times. The Gel LED flashes 2 times slowly and 6 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately. Setting options: P0 = Standard setting; P1 = With second interim rinse.	**Long**	**Short**	**Display**
2	6				**-**	**-**	**P0**
					-	1	P1
Long	**Short**	Pos. 27: Extended drying time (from software version ID no. 818)	Press the Gel button 27 times. The Gel LED flashes 2 times slowly and 7 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately. Setting options: P0 = Normal drying time; P1 = Extended drying time.	**Long**	**Short**	**Display**
2	7				**-**	**-**	**P0**
					-	-	P1
Long	**Short**	Pos. 36: Machine height setting (from software version ID no. 818) *1	Press the Gel button 36 times. The Gel LED flashes 3 times slowly and 6 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately. Setting options: P0 = Normal machine height (G1xxx); P1 = XXL model (G2xxx).	**Long**	**Short**	**Display**
3	6				**-**	**-**	**P0**
					-	-	P1

Table 6-41: G1470 / G2470 Programming Mode Options (Cont. from Table 6-40) (Cont. on Table 6-42)

Flashing Rhythm of Delay start LED		Function	Programming	Display	Flashing Rhythm of Rinse LED		
Long	**Short**	Pos. 38: Model variant setting *1	Press the Gel button 38 times. The Gel LED flashes 3 times slowly and 8 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately. Individual setting possibilities depend on model and whether a circulation pump with slide shutter (WAW) and sensor softener (SEH) are fitted as follows: Select setting P3 = G147x, G247x (without WAW, with SEH).	**Long**	**Short**	**Display**
3	8				**-**	**3**	**P3**
Long	**Short**	Pos. 39: Country variant setting (from software version ID no. 818) *1	Press the Gel button 39 times. The Gel LED flashes 3 times slowly and 9 times rapidly intermittently. Press the program button as appropriate to make the desired setting.	The display shows P and a digit alternately. The following country versions can be set: P1 = EUR (Europe); P2 = AUS (Australia); P3 = USA, P4 = JPN (Japan), P5 = I/E (Italy/Spain), P6 = SER (Southern Europe) *3	**Long**	**Short**	**Display**
3	9				-	1	P1
					-	2	P2
					-	**3**	**P3**
					-	4	P4
					-	5	P5
					-	6	P6

Table 6-42: G1470 / G2470 Programming Mode Options (Continued from Table 6-41)

*1 If the electronic unit is exchanged during service work, it must be programmed as follows: First set the country variant and model variant, then switch off the unit, repeat the accessing procedure and set the machine height. Then the on-site water hardness must be set.

*2 On models with software version ID no. 769, the “Resetting standard settings” function is at Pos.19.

*3 The SER variant includes the following countries: Portugal, France, Netherlands, Belgium and Great Britain.

Save and quit
Switch off the unit.

6.4.2.2 G1470 / G2470 – Service Mode

Initial requirements
1. Open the door.
2. Switch off the machine.

Accessing
1. Press and hold the program button.
2. Switch on the machine.
3. Release the program button when the decimal point is in the display.
4. Immediately press and release the program button 3 times and at the 3rd time hold until the Rinse & Hold LED flashes.
5. Release the program button.

If the Rinse & Hold LED has not started to flash within approx. 4 sec., the accessing procedure must be repeated.

Acknowledgement Indicator
Successful accessing of the Service mode is indicated by a slow flashing **Rinse & Hold** LED (1 Hz).

Options
Refer to Tables: 6-43.

Function	Programming	Display
Pos. 0: Software version ID check	Do not press the **Gel** button. The **Gel** LED is off.	The display shows the software version ID No., e.g. -769
Pos. 1: Fault memory display and deletion	Press the Gel button once. The **Gel** LED flashes once rapidly intermittently. Press the **program** button. Press it again to display fault codes that may have been saved.	The display shows **F** and a fault code number alternately, see 6.7, Fault code summary. If the fault memory is empty, **F** and **0** are displayed alternately.
	To delete the fault memory, press the **program** button again and hold it until **F** and **0** are shown alternately	The display shows **F** and **0** alternately.
Pos.2: Component test	Press the **Gel** button 2 times. The **Gel** LED flashes 2 times rapidly intermittently. Press the **program** button. Press it again to activate the next component.	The display shows which component is being tested: For example if the drain pump M8 is being tested, **U** and **3** are shown alternately. For the test sequence and background information about individual components and their activation, see 6.4.2.3, Component test.
Pos 3: Vacant	When the decimal point in the display has switched off after approx. 6 sec., press the **Gel** button 3 times. The **Gel** LED flashes 3 times rapidly intermittently. Press the **program** button.	The display shows = 0
Pos 4: Operating hours check	Press the **Gel** button 4 times. The **Gel** LED flashes 4 times rapidly intermittently.	The display shows the number of operating hours as follows: If the machine has run for 74 hours, **H, 7** and **4** are displayed alternately.
Pos. 5.1: LED test	Press the **Gel** button 5 times. The **Gel** LED flashes 5 times rapidly intermittently. Press the **program** button.	The display shows **6.1**: All LEDs are lit.
Pos. 5.2: Buzzer test	Press the **Gel** button 5 times. The **Gel** LED flashes 5 times rapidly intermittently. Press the **program** button 2 times.	This display shows **6.2**: The buzzer is activated.
Pos. 6: Vacant	Press the **Gel** button 6 times. The **Gel** LED flashes 6 times rapidly intermittently. Press the **program** button.	The display shows **C0**.

Table 6-43: G1470 / G2470 Service Mode Options

Quit (without saving)
Switch off the unit.

6.4.2.3 G1470 / G2470 Component Test

After selecting the service mode and successfully accessing the component test program, individual electrical components can be activated via the program button (Start/Stop for Integrated models). During this procedure, certain components can only be activated via special mini-programs.

Test sequence and background information:

U1. R1, Y2, M6,…, wash sequence with heating (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. At the same time the water inlet valve is activated, the slide shutter is set to the middle spray arm position. After 2.7 l has been registered, the EGS (electronically controlled water softener) valve is also opened until the total desired intake quantity has been reached. The circulation pump with switched auxiliary winding is then operated. At the same time the slide shutter is activated with its setting alternating at 15 sec. intervals. After a further 60 sec., the heating relay is switched on for 300 sec. and the water is heated to 122°F. The mini-program ends with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off).

Note
The mini-program does not include any fault testing function.

U2. 1K1, heating relay:
The heating relay is activated for 60 sec.

U3. M8, drain pump:
The drain pump is activated for 60 sec.

U4. Y2, Y5, water inlet valves with EGS (electronically controlled water softener) valve (mini-program):

The water inlet valve is activated (on models with and without slideshutter) until 5.4 l has been taken in. After 2.7 l has been registered, the EGS valve is also opened until the total desired water quantity has been reached

Warning!
If the flow meter is defective, the EGS valve is not activated.

U5. Y5, EGS valve:
The EGS valve is activated for 60 sec.

U6. M6, circulation pump switched winding relay:
The circulation pump with switched auxiliary winding is activated. With a controlled circulation pump, the activation is at the maximum speed for controlled operation. The circulation pump is activated for 30 sec., but the auxiliary winding relay is only activated during the first 15 sec.

Warning!
The circulation pump must not run for more than 30 sec. without water.

Note
During the period when the auxiliary winding relay is activated, a higher circulation pump current of approx. 0.9 A flows. Afterwards the current is approx. 0.16 A.

U7. Vacant

U8. Vacant

U9. Vacant

U10. Y50, combination dispenser:
The combination dispenser is activated with pulsed operation for 60 sec. The pulse rhythm throughout the test period is 10 sec. on / 10 sec. off.

U11. Y38, Y2, Y5,…, reactivation sequence (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on/2 sec. off). The water inlet valve with EGS valve is then activated until 250 ml has been reached or 60 sec. has elapsed. The reactivation valve is then activated for 120 sec. Following this the water inlet valve and the drain pump, which begins with pulsed priming (2 sec. on/2 sec. off), are operated together for 60sec.

Starting with software version ID 984 the reactivation component test operates as follows:

At the start of the mini-program the drain pump M8, water inlet valve Y2 and EGS valve Y5 are activated at the same time. M8 pumps water for 30 sec. and is primed with pulsed priming (2 sec. on/2 sec. off). Y2 and Y5 are switched off when 250 ml has been reached or 60 sec. has elapsed. The reactivation valve Y38 is then activated for 150 sec. following this, the water inlet valve and the drain pump, which begins without pulsed priming (2 sec. on/2 sec. off), are operated together for 60 sec.

U12. Vacant

U13. Y38, reactivation valve:
The reactivation valve is activated for 60 sec.

U14. M2, fan:
The fan is activated for 60 sec.

U15. Vacant

U16. Vacant

U17. Vacant

6.5 Excella Series

6.5.1 Excella Series – G2630

6.5.1.1 G2630 Programming Mode

Initial requirements
1. Close the door.
2. Switch off the machine.

Accessing
1. Press and hold the **Start/Stop** button.
2. Switch on the machine.
3. Once the “Miele welcome” display appears release the **Start/Stop** button.
4. Immediately press and release the **Start/Stop** button 5 times and at the 5th time hold until the **programmable functions** appear.

> **Note**
> If the **Start** LED does not switch off within approx. 10 sec., repeat the accessing procedure.

5. Release the **Start/Stop** button

If the **programmable functions** do not appear in the LED display, repeat the procedure.

Acknowledgement Indicator
Successful accessing of the Service Dept. programming mode is indicated by the LED’s, which are all off and the setting options shown in the display.

> **Note**
> Positions 1 – 19 can also be selected via the Settings menu.

Options
Refer to Tables: 6-44 through 6-48.

Function	Programming	Display
Pos. 1: Reset	Use the cursor buttons as appropriate to select **Reset,** then press the **OK** button. Use the cursor buttons to make the desired setting.	This programmable function can be used to reset all parameters (both customer and service programming) to the standard settings.
Pos. 2: Language setting	Use the cursor buttons as appropriate to select **Language,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the available options.
Pos. 3: Time of day setting	Use the cursor buttons as appropriate to select **Time…,** then press the **OK** button. Use the cursor buttons to make the desired setting.	Display options: **24 h Clock** or **12 h Clock.** After selection, the display changes to the appropriate time indication.
Pos. 4: Tab type or detergent setting [1)]	Use the cursor buttons as appropriate to select **Tab type** or **Detergent type** (from software version ID no.984), then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the following options for the detergent type: **Normal** (powder detergent) **2 in 1, 3 in 1** or **Liquid detergent** (from software version ID no. 984).
Pos. 5: Dispensed rinse aid quantity setting	Use the cursor buttons as appropriate to select **Rinse aid,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the current rinse aid dispensed quantity setting. Setting range: 0 ml – 6 ml. Standard setting: 3 ml.
Pos. 6: Interval between filter checks setting	Use the cursor buttons as appropriate to select **Check filters,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the number of wash programs between filter checks. Setting range: 30 – 60 wash programs.

Table 6-44: G2630 Programming Mode Options (Continued on Table 6-45)

Function	Programming	Display
Pos. 7: **Sensor wash** program modification (from software version ID no. 984)	Use the cursor buttons as appropriate to select **Adjust sensor wash,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the options **On** and **Off.** This function is used to adjust the **Sensor wash** program parameters so it can be used to wash items with stubborn stains even if the overall level of soiling is otherwise low.
Pos. 8: Main menu modification	Use the cursor buttons as appropriate to select **Change main menu.,** then press the **OK** button. Use the cursor buttons to mark the program that is to be exchanged, then press the **OK** button. Then use the cursor buttons to select the program that is to replace the removed program.	The display shows the program available. The order of the first three can be modified. After fixing and confirming a new order, **Rearranging** is displayed.
Pos. 9: Saving extras	Use the cursor buttons as appropriate to select **Save extras,** then press the **OK** button. Use the cursor buttons to make the desired setting.	This function is activated as standard. This is indicated in the display by **On.** If the function is not desired, select **Off.**
Pos. 10: System lock activation	Use the cursor buttons as appropriate to select **System lock,** then press the **OK** button. Use the cursor buttons to make the desired setting.	This function is deactivated as standard. This is indicated in the display by **Off**. If the function is desired, select **On**.
Pos. 11: In operation lock	Use the cursor buttons as appropriate to select **In operation lock,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the setting options **Permitted** [6)] and **Not possible** (**On / Off** from software version ID no. 984).
Pos. 12: Temperature setting	Use the cursor buttons as appropriate to select **Temperature,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The options **°C** and **°F** are available.

Table 6-45: G2630 Programming Mode Options (Cont. from Table 6-44) (Cont. on Table 6-46)

Function	Programming	Display
Pos. 13: Buzzer activation / deactivation and volume setting	Use the cursor buttons as appropriate to select **Buzzer,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the options **Off, Normal** and **Loud.** The function is activated as standard [5)].
Pos. 14: Audible confirmation signal activation / deactivation	Use the cursor buttons as appropriate to select **Keypad tone,** then press the **OK** button. Use the cursor buttons to make the desired setting.	An audible confirmation signal when a touchpad is pressed is active as standard. This is indicated in the display by **On.** If the function is not desired, select **Off**
Pos. 15: Brightness setting	Use the cursor buttons as appropriate to select **Brightness,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display brightness range has 17 steps shown in bar form. Standard setting: 8.
Pos. 16: Contrast setting	Use the cursor buttons as appropriate to select **Contrast,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display contrast range has 17 steps shown in bar form. Standard setting: 8.
Pos. 17: Standby[2)] activation / deactivation	Use the cursor buttons as appropriate to select **Standby,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the options **On** and **Not in current program.**
Pos. 18: Memory activation / deactivation	Use the cursor buttons as appropriate to select **Memory,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the options **On** (standard setting) and **Off.**
Pos. 19: Dealer demonstration mode activation.	Use the cursor buttons as appropriate to Select **Dealer,** then press the **OK** button. Confirm **Demo program activation** with the **OK** button. Use the cursor buttons to make the desired setting and press any button to start the program. To interrupt a started demo program, press any button and then confirm by pressing the **OK** button.	The display shows the options **Demo program, Demo in cont. loop** and **Demo with sound.**

Table 6-46: G2630 Programming Mode Options (Cont. from Table 6-45) (Cont. on Table 6-47)

Technical Information

Function	Programming	Display
Pos. 20: Resetting standard settings	Use the cursor buttons as appropriate to select **Factory default,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the option **Reset.** If it is selected, all parameters that can be modified by the customer (extras and settings) will be reset to the standard settings.
Pos. 21: Wash/Final rinse temperature modification (from software version ID no. 984).	Use the cursor buttons as appropriate to select **Temperatures,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the options **Main wash** and **Final rinse.** This increases the main wash or final rinse temperature with a running time extension.
Main wash	Use the cursor buttons to select the desired option.	The display shows the options **Normal** and **Increased**
Final rinse	Use the cursor buttons to select the desired option.	The display shows the options **Normal** and **Increased**
Pos. 23: Water quantity normal / increased	Use the cursor buttons as appropriate to select **Water plus,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the options **Normal** and **Increased**
Pos. 24: Sensor softener activation / deactivation, water hardness manual setting	Use the cursor buttons as appropriate to select **Water hardness,** then press the **OK** button. Use the cursor buttons to make the desired setting.	**Automatic** = sensor softener activated. Alternatively the on-site water hardness can be directly selected. Setting range: 1°d to 70°d (°d = Degree of German hardness). See Table 6-2.
Pos. 25: Program running time reduction (from software version ID no. 984)	Use the cursor buttons as appropriate to select **Shorten the program,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the options **On** and **Off** (standard setting). This offers a program-dependent running time reduction by reducing temperatures and/or canceling holding times.
Pos. 26: Second interim rinse selection (from software version ID no. 984)	Use the cursor buttons as appropriate to select **2nd interim rinse,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the options **On** and **Off** (standard setting)

Table 6-47: G2630 Programming Mode Options (Cont. From Table 6-46) (Cont. on Table 6-48)

Function	Programming	Display
Pos. 27: Machine height setting[3)]	Use the cursor buttons as appropriate to select **Appliance height,** then press the **OK** button. Use the cursor buttons to make the desired setting.	The display shows the options **Normal** (G 1xxx) and **XXL** (G2xxx)
Pos. 28: Country variant setting[3)]	Use the cursor buttons as appropriate to select **Country version,** then press the **OK** button. Use the cursor buttons to make the desired setting.	Setting options: **EUR** = Europe, **AUS** = Australia, **USA, JPN** = Japan, **I/E** = Italy/Spain, **SER** = Southern Europe[4)]
Pos. 29: Model variant setting [3)]	Use the cursor buttons as appropriate to select **Model type,** then press the **OK** button. Use the cursor buttons to make the desired setting.	On models with salt container in the door (SIT) (G x7xx), this option must be set to **0.** If the dishwasher does not have a salt container in the door (SIT), **1** must be selected.

Table 6-48: G2630 Programming Mode Options (Continued on Table 6-47)

1) From software version ID no. 984, the display has been changed from Tab type to Detergent type.

2) The display is switched off after approx. 10 min. in order to save energy if, during this period, no control has been activated.

3) If the electronic unit is exchanged during service work, it must be programmed as follows: First set the country variant and model variant, then switch off the unit, repeat the accessing procedure and set the machine height.

4) The SER variant includes the following countries: Portugal, France, Netherlands, Belgium and Great Britain.

5) When this option is active, an audible signal operates at the end of the program (5 signals repeated after a short pause) and if a fault is registered (single continuous signal).

6) If Permitted is selected, locking during operation is possible. However, locking can only be carried out after a program has been started, see the appropriate operating instructions.

Save and quit

1. Press the OK button
2. Switch off the unit.

6.5.1.2 G2630 – Service Mode

Initial requirements
1. Close the door.
2. Switch off the machine.

Accessing
1. Press and hold the Start/Stop button.
2. Switch on the machine.
3. Once the **"Miele Welcome"** display appears, release the Start/Stop button.
4. Immediately press and release the **Start/Stop** button 3 times and at the 3rd time hold until the **programmable functions** appear in the display.

> **Note**
> If the **Start** LED does not switch off within approx. 10 sec., repeat the accessing procedure.

5. Release the Start/ Stop button.

If the Start/Stop LED has not started to flash within approx. 4 sec., the accessing procedure must be repeated.

Acknowledgement Indicator
Successful accessing of the Service mode is indicated by the LED's, which are all off and the service options shown in the display.

Use the cursor buttons as appropriate to scroll the display.

Options
Refer to Table: 6-49.

Function	Programming	Display
Software version ID check	Select ID no. with the **OK** button.	The display shows version ID no. for the selection-display module (BAE) *1 and control-power module (SLT) *2
Fault memory display	Use the cursor buttons to select **Fault memory.** To return to the main menu select **Back**, press the **OK** button.	The display shows saved fault messages. If several faults have been registered, they will be indicated one after the other. For a fault code summary, see 6.7, Fault code summary. Alternatively, **No fault** is displayed.
Fault memory deletion	Select **Fault memory**. Select the option **Delete fault memory?** With the cursor button, then press the **OK** button.	In addition to the fault messages, the option **Delete fault memory?** Is displayed.
Component test	Use the cursor buttons to select **Consumers.** Individual components V01 – V017 can be selected via the cursor button. To return to the main menu scroll to **Back** then press the **OK** button.	The display shows the components and mini programs that can be activated with wiring diagram abbreviations. They can be selected via the cursor button. After 2 sec. the appropriate test program starts, see 6.5.1.3, Component test.
Operating hours check	Scroll to **Operating hours.** Press the **OK** button. To return to the main menu press the **OK** button again.	The display shows the number of operating hours.
LED test	Scroll to **Operation.** Press the **OK** button. Select the option **B01: LED Test.** To return to the main menu, press the **OK** button	All LED's and the display light up.
Buzzer test	Select **Operation.** Select the option **B02: Buzzer Test.** To return to the main menu, Select **Back** and press the **OK** button.	The buzzer is activated.

Table 6-49: G2630 Service Mode Options

*1 Selection-Display module

*2 Control-power module

Save and quit
Switch off the unit.

6.5.1.3 G2630 Component Test

After selecting the service mode and successfully accessing the component test program, individual electrical components can be activated via the program button (Start/Stop for Integrated models). During this procedure, certain components can only be activated via special mini-programs.

Test sequence and background information:

V01. R1, Y2, M6, …, wash sequence with heating (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. At the same time the water inlet valve is activated, the slide shutter is set to the middle spray arm position. After 2.7 l has been registered, the EGS (electronically controlled water softener) valve is also opened until the total desired intake quantity has been reached. The circulation pump with switched auxiliary winding is then operated. At the same time the slide shutter is activated with its setting alternating at 15 sec. intervals. After a further 60 sec., the heating relay is switched on for 300 sec. and the water is heated to 122°F. The mini-program ends with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off).

Note
The mini-program does not include any fault testing function.

V02. 1K1, heating relay:
The heating relay is activated for 60 sec.

V03. M8, drain pump:
The drain pump is activated for 60 sec.

V04. Y2, Y5, water inlet valves with EGS (electronically controlled water softener) valve (mini-program):

The water inlet valve is activated (on models with and without slide shutter) until 5.4 l has been taken in. After 2.7 l has been registered, the EGS valve is also opened until the total desired intake quantity has been reached.

Warning!
If the flow meter is defective, the EGS valve is not activated.

V05. Y5, EGS valve:
The EGS valve is activated for 60 sec.

V06. M6, circulation pump switched winding relay:
The circulation pump with switched auxiliary winding is activated. With a controlled circulation pump, the activation is at the maximum speed for controlled operation. The circulation pump is activated for 30 sec., but the auxiliary winding relay is only activated during the first 15 sec.

Warning!
The circulation pump must not run for more than 30 sec. without water.

Note
During the period when the auxiliary winding relay is activated, a higher circulation pump current of approx. 0.9 A flows. Afterwards the current is approx. 0.16 A.

V07. M24, M6, slide shutter at middle spray arm setting with circulation pump:

The slide shutter is activated and set to the top/bottom spray arm setting. The circulation pump is then operated for 30 sec. at the maximum speed for controlled operation.

V08. M24, M6 The slide shutter at top/bottom spray arm with pump

The slide shutter and set to top/bottom spray arm setting. The circulation pump is then activated for 30 sec. at the maximum speed for controlled operation.

V09. M24, The slide shutter:
The slide shutter is activated for 60 sec.

V10. Y50, combination dispenser:

The combination dispenser is activated with pulsed operation for 60 sec. The pulse rhythm throughout the test period is 10 sec. on / 10 sec. off.

V11. Y38, Y2, Y5, …, reactivation sequence (mini program):

This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve with EGS (electronically controlled water softener) valve is then activated until 250 ml has been reached or 60 sec. has elapsed. The SIT brine valve Y60 is then activated for 150 sec. The reactivation valve is then activated for 120 sec. Following this the water inlet valve and the drain pump, which begins with pulsed priming (2 sec. on / 2 sec. off), are operated together for 60 sec.

Starting with software version ID 984 the reactivation component test operates as follows:

At the start of the mini-program the drain pump M8, water inlet valve Y2 and EGS valve Y5 are activated at the same time. M8 pumps water for 30 sec. and is primed with pulsed priming (2 sec. on/2 sec. off). Y2 and Y5 are switched off when 250 ml has been reached or 60 sec. has elapsed. The reactivation valve Y38 is then activated for 150 sec. following this, the water inlet valve and the drain pump, which begins without pulsed priming (2 sec. on/2 sec. off), are operated together for 60 sec.

Warning!
If the reactivation mini program has been started, it must not be cancelled prematurely. If it is interrupted, there is a risk that brine will overflow out of the SIT, salt container in door, into the machine cabinet.

V12. Y60, Brine valve (salt container in door (SIT) valve):
The brine valve is activated for 60 sec.

V13. Y38, reactivation valve:
The reactivation valve is activated for 60 sec.

V14. M2, fan:
The fan is activated for 60 sec.

V15. B3/9, M6, circulation pump with Speed sensor

The circulation pump with switched auxiliary winding is activated for 30 sec. at maximum speed. If the desired speed has not been reached within 7 sec., the circulation pump remains station

V16. 4N1, M6, wash sequence with middle spray arm sensor (miniprogram):

This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. Concurrently with water inlet valve activation, the slide shutter is set to the middle spray arm position. The circulation pump with switched auxiliary winding is then operated. If a spray arm fault is registered during circulation pump operation, the pump is switched off after 60 sec., otherwise if operates for an additional 120 sec.

V17. 5N1, M6, wash sequence with bottom spray arm sensor (mini program):

This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. At the same time the water inlet valve is activated, the slide shutter is set to the middle spray arm position. The circulation pump with switched auxiliary winding is then operated. After 2 sec. the slide shutter is set to the top/bottom spray arm position. If a spray arm fault is registered during circulation pump operation, the pump is switched off after 60 sec., otherwise it operates for a further 120 sec.

6.5.2 Excella Series – G2670

6.5.2.1 G2670 Programming Mode

Initial requirements
1. Open the door.
2. Switch off the machine.

Accessing
1. Press and hold the **C (Clear)** Button
2. Switch on the machine.
3. Release the C (Clear) button.
4. When display lights up, immediately press and release the **C (Clear)** button 5 times and at the 5 time hold for 4 seconds.

Acknowledgement Indicator
Successful accessing of the Service Dept. programming mode is indicated by LEDs, which are all off and the indication Service Programming shown in the right display

The display shows two parameters at the same time.

Use the cursor button to scroll the display.

Options
Refer to Tables: 6-50 through 6-52.

Note
Some of the following parameters can also be programmed via the **Settings** menu.

Function		Programming	Display
Reset		Select **Reset**. To reset all parameters to the standard setting, press the **OK** button. Press the **back** button to return to the main menu.	The display shows **Reset factory default settings?**
Language setting		Select **Language**. Make the desired selection and confirm with the **OK** button.	The display shows the available options. A language must be selected to return to the main menu.
Time of day setting		Select Time of day, then one of the sub-menus and confirm with the **OK** button.	The display shows the sub-menus **Format** and **Set manually**.
	Format	Select the desired options and confirm with the **OK** button.	Display options: **24 h Clock** or **12 h Clock.**
	Set Manually	Set the time (first hours and then minutes) with the **+** and – buttons and confirm with **OK** button.	Entry prompts are given
Tab type or detergent setting *3		Select **Tab type** or **Detergent type** (from software version ID no. 984). Make the desired selection and confirm with the **OK** button.	The display shows the following options for the detergent type: **Normal** (power detergent) **2 in 1, 3 in 1** or **Liquid detergent** (from software version ID no. 984).
Dispensed rinse aid quantity setting		Select **Rinse aid**. Make the desired setting with the **+** and **–** buttons and confirm with the **OK** button.	The display shows the current rinse aid dispensed quantity setting. Setting range: 0 ml – 6 ml. Standard setting: 3 ml.
Interval between filter checks setting		Select **Check filters**. Make the desired selection and confirm with the **OK** button.	The display shows the number of wash programs between filter checks. Setting range: 30 – 60 wash programs.
Sensor wash program modification (from software version ID no. 984)		Select **Adjust sensor wash**. Make the desired selection and confirm with the **OK** button.	The display shows the options on and off (standard setting). This function is used to adjust the Sensor wash program parameters so it can be used to wash items with stubborn stains even if the overall level of soiling is otherwise low.
Reorganize Program		Select **Reorganize Program**. Select the desired program for position 1. Press the **Continue** button. Proceed similarly for position 2. After completing the desired changes, confirm the selection with the **Finished** button and return to the main menu.	The display shows the programs available. The order of the first two can be modified. After fixing and confirming a new order, the list is shown again.
Saving Options		Select **Save Options.** Make the desired selection and confirm with the **OK** button.	This function is activated as standard. This is indicated in the display by **On**. If the function is not desired, select **Off.**

Table 6-50: G2670 Programming Mode Options (Continued on Table 6-51)

Function		Programming	Display
Temperature setting		Select **Temperature**. Make the desired selection and confirm with the **OK** button.	The options **°C** and **°F** are available
Buzzer activation / deactivation and volume setting		Select **Buzzer.** Make the desired selection and confirm with the **OK** button.	The display shows the options **Off, Normal** and **Loud**
Audible confirmation signal activation / deactivation		Select **Keypad tone**. Make the desired selection and confirm with the **OK** button	An audible confirmation signal when a button is pressed is active as standard. This is indicated in the display by **On**. If the function is not desired, select **Off**
Brightness setting		Select **Brightness**. Press the **Dimmer** or **Brighter** buttons as appropriate to make the desired selection and confirm with the **OK** button	The display brightness range has 17 steps shown in bar form. Standard setting: 8.
Memory activation / deactivation		Select **Memory**. Make the desired selection and confirm with the **OK** button.	The display shows the options **On** (standard setting) and **Off**. The memory function can be used to save the most recently selected program.
Dealer demonstration mode activation.		Select **Dealer**. Make the desired selection and confirm with the **OK** button.	The display shows the options **Demo program, Demo in cont. loop** and **Demo with sound**. In addition the option **Off** is available to deactivate the mode.
Factory Default		Select **Factory default**. If all parameters that can be modified by the customer (extras and settings) should be reset to the standard settings, press the **OK** button.	The display shows **Reset factory default settings?**
Wash/Final rinse temperature modification (from software version ID no. 984).		Select **Temperatures** then select the desired sub-menu.	The display shows the options **Main wash** and **Final rinse**. This increases the main wash or final rinse temperature with a running time extension.
	Main wash	Make the desired selection and confirm with the **OK** button	The display shows the options **Normal** and **Increased**
	Final rinse	Make the desired selection and confirm with the **OK** button	The display shows the options **Normal** and **Increased**

Table 6-51: G2670 Program Mode Options (Cont. from Table 6-50) (Cont. on Table 6-52)

Function	Programming	Display
Water-Plus quantity normal / increased	Select **Water plus**. Make the desired selection and confirm with the **OK** button	The display shows the options **Normal** and **Increased**
Sensor softener activation / deactivation, water hardness manual setting	Select **Water hardness.** Make the desired selection and confirm with the **OK** button	**Automatic** = sensor softener activated. Alternatively the on-site water hardness can be directly selected. Setting range: 1°d to 70°d (°d = Degree of German hardness).
Program running time reduction (from software version ID no. -984)	Select **Shorten the program.** Make the desired selection and confirm with the **OK** button.	The display shows the options On and Off (standard setting). This offers a program dependent running time reduction by reducing temperatures and/or canceling holding times.
Second interim rinse selection (from software version ID no. 984)	Select 2nd **interim rinse**. Make the desired selection and confirm with the **OK** button	The display shows the options **On** and **Off** (standard setting)
Machine height setting *1	Select **Appliance height.** Make the desired selection and confirm with the **OK** button	The display shows the options **Norma**l (G 1xxx) and **XXL** (G2xxx)
Country variant setting *1	Select **Country version.** Make the desired selection and confirm with the **OK** button	Setting options: **EUR** = Europe, **AUS** = Australia, **USA, JPN** = Japan, I/E = Italy/Spain, **SER** = Southern Europe *2
Model variant setting *1	Select **Model type**. Make the desired selection and confirm with the **OK** button	On models with salt container in the door (SIT) (e.g. G1870, G2870) this option must be set to **VI7**. If the dishwasher does not have a salt container in the door (SIT), **VI5** must be selected.

Table 6-52: G2670 Programming Mode Options (Continued from Table 6-51)

*1 If the electronic unit is exchanged during service work, it must be programmed as follows: First set the country variant and model variant, then switch off the unit, repeat the accessing procedure and set the machine height.

*2 The SER variant includes the following countries: Portugal, France, Netherlands, Belgium and Great Britain.

*3 From software version ID no. 984 the display **Tab type** has been superseded by **Detergent type**.

Save and quit
Switch off the unit.

6.5.2.2 G2670 – Service Mode

Initial requirements
1. Open the door.
2. Switch off the machine.

Accessing
Press and hold the **C (Clear)** button or touchpad.
Switch on the machine.
Release the **C (Clear)** button or touchpad.
Immediately press and release the **C (Clear)** button or touchpad 3 times, at the 3rd time hold for at least 4 seconds.

Acknowledgement Indicator
Successful accessing of the Service mode is indicated by the LEDs, which are all off and the indication **Service program** shown in the right of the display.

The display shows two parameters at the same time.

Use the cursor buttons as appropriate to scroll the display.

Options
Refer to Table: 6-53.

Technical Information

Function	Programming	Display
ID no. check	Select ID Number. To return to the main menu, press the OK button or touchpad.	The display shows version ID no. for the selection-display module (BAE) *1 and control-power module (SLT) *2
Fault memory display	Select Fault memory. To return to the main menu, press the OK button or touchpad.	The display shows saved fault messages. If several faults have been registered, they will be indicated one after the other. For a fault code summary, see 6.7, Fault code summary. Alternatively, No fault is displayed.
Fault memory deletion	Select Fault memory. To return to the main menu, press the OK button or touchpad.	The display shows saved fault messages. If several faults have been registered, they will be indicated one after the other. For a fault code summary, see 6.7, Fault code summary. Alternatively, No fault is displayed.
Component test	Select component. Individual components V01 – V17 can be selected via the cursor touchpad. To return to the main menu, press the C (Clear) button or touchpad.	The display shows the components and mini programs that can be activated with wiring diagram abbreviations. They can be selected via the cursor touchpad. After 2 sec. the appropriate test program starts, see 6.5.2.3, Component test.
Operating hours check	Select Operating hours. To return to the main menu, press the OK touchpad.	The display shows the number of operating hours
Operation: LED test	Select Operation. Select the option B01: LED test. To return to the main menu, press the C (Clear) button or touchpad.	All LEDs and the display light up
Operation: Buzzer test	Select Operation. Select the option B02: Buzzer test. To return to the main menu, press the C (Clear) button or touchpad.	The buzzer is activated

Table 6-53: G2670 Service Mode Options

*1 Selection-display module

*2 Control-power module

Quit (without saving)
Switch off the unit.

6.5.2.3 G2670 Component Test

After selecting the service mode and successfully accessing the component test program, individual electrical components can be activated via the program button (Start/Stop for Integrated models). During this procedure, certain components can only be activated via special mini-programs.

Test sequence and background information:

V01. R1, Y2, M6, …, wash sequence with heating (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. At the same time the water inlet valve is activated, the slide shutter is set to the middle spray arm position. After 2.7 l has been registered, the EGS (electronically controlled water softener) valve is also opened until the total desired intake quantity has been reached. The circulation pump with switched auxiliary winding is then operated. At the same time the slide shutter is activated with its setting alternating at 15 sec. intervals. After a further 60 sec., the heating relay is switched on for 300 sec. and the water is heated to 122°F. The mini-program ends with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off).

Note
The mini-program does not include any fault testing function.

V02. 1K1, heating relay:
The heating relay is activated for 60 sec.

V03. M8, drain pump:
The drain pump is activated for 60 sec.

V04. Y2, Y5, water inlet valves with EGS (electronically controlled water softener) valve (mini-program):

The water inlet valve is activated (on models with and without slide shutter) until 5.4 l has been taken in. After 2.7 l has been registered, the EGS valve is also opened until the total desired intake quantity has been reached.

Warning!
If the flow meter is defective, the EGS valve is not activated.

V05. Y5, EGS valve:
The EGS valve is activated for 60 sec.

V06. M6, circulation pump switched winding relay:

The circulation pump with switched auxiliary winding is activated. With a controlled circulation pump, the activation is at the maximum speed for controlled operation. The circulation pump is activated for 30 sec., but the auxiliary winding relay is only activated during the first 15 sec.

Warning!
The circulation pump must not run for more than 30 sec. without water.

Note
During the period when the auxiliary winding relay is activated, a higher circulation pump current of approx. 0.9 A flows. Afterwards the current is approx. 0.16 A.

V07. M24, M6, slide shutter at middle spray arm setting with circulation pump:

The slide shutter is activated and set to the top/bottom spray arm setting. The circulation pump is then operated for 30 sec. at the maximum speed for controlled operation.

V08. M24, M6 The slide shutter at top/bottom spray arm with pump

The slide shutter and set to top/bottom spray arm setting. The circulation pump is then activated for 30 sec. at the maximum speed for controlled operation.

V09. M24, The slide shutter:
The slide shutter is activated for 60 sec.

V10. Y50, combination dispenser:

The combination dispenser is activated with pulsed operation for 60 sec. The pulse rhythm throughout the test period is 10 sec. on / 10 sec. off.

V11. Y38, Y2, Y5, …, reactivation sequence (mini program):

This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve with EGS (electronically controlled water softener) valve is then activated until 250 ml has been reached or 60 sec. has elapsed. The SIT brine valve Y60 is then activated for 150 sec. The reactivation valve is then activated for 120 sec. Following this the water inlet valve and the drain pump, which begins with pulsed priming (2 sec. on / 2 sec. off), are operated together for 60 sec.

Starting with software version ID 984 the reactivation component test operates as follows:

At the start of the mini-program the drain pump M8, water inlet valve Y2 and EGS valve Y5 are activated at the same time. M8 pumps water for 30 sec. and is primed with pulsed priming (2 sec. on/2 sec. off). Y2 and Y5 are switched off when 250 ml has been reached or 60 sec. has elapsed. The reactivation valve Y38 is then activated for 150 sec. following this, the water inlet valve and the drain pump, which begins without pulsed priming (2 sec. on/2 sec. off), are operated together for 60 sec.

Warning!
If the reactivation mini program has been started, it must not be cancelled prematurely. If it is interrupted, there is a risk that brine will overflow out of the SIT, salt container in door, into the machine cabinet.

V12. Y60, Brine valve (salt container in door (SIT) valve):
The brine valve is activated for 60 sec.

V13. Y38, reactivation valve:
The reactivation valve is activated for 60 sec.

V14. M2, fan:
The fan is activated for 60 sec.

V15. B3/9, M6, circulation pump with Speed sensor

The circulation pump with switched auxiliary winding is activated for 30 sec. at maximum speed. If the desired speed has not been reached within 7 sec., the circulation pump remains station

V16. 4N1, M6, wash sequence with middle spray arm sensor (miniprogram):

This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. Concurrently with water inlet valve activation, the slide shutter is set to the middle spray arm position. The circulation pump with switched auxiliary winding is then operated. If a spray arm fault is registered during circulation pump operation, the pump is switched off after 60 sec., otherwise if operates for an additional 120 sec.

V17. 5N1, M6, wash sequence with bottom spray arm sensor (mini program):

This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. At the same time the water inlet valve is activated, the slide shutter is set to the middle spray arm position. The circulation pump with switched auxiliary winding is then operated. After 2 sec. the slide shutter is set to the top/bottom spray arm position. If a spray arm fault is registered during circulation pump operation, the pump is switched off after 60 sec., otherwise it operates for a further 120 sec.

6.6 LaPerla - G2830

6.6.1 G2830 - Program Mode

Initial requirements
1. Close the door.
2. Switch off the machine.

Accessing
Press and hold the **C (Clear)** touchpad.
Switch on the machine.
Release the **C (Clear)** touchpad.
Immediately press and release the **C (Clear)** touchpad 5 times and at the 5th time hold for 4 seconds.

Acknowledgement Indicator
Successful accessing of the Service Dept. programming mode is indicated by the LEDs, which are all off and the indication **Service programming** shown in the right display.

The display shows two parameters at the same time.

Use the cursor button to scroll the display.

Options
Refer to Tables: 6-54 through 6-56.

Note
Some of the following parameters can also be programmed via the **Settings** menu.

Function	Programming	Display
Reset	Select Reset. To reset all parameters to the standard setting, press the OK touchpad. Press the back button to return to the main menu.	The display shows Reset factory default settings?
Language setting	Select Language. Make the desired selection and confirm with the OK touchpad.	The display shows the available options. A language must be selected to return to the main menu.
Time of day setting	Select Time of day, then one of the sub-menus and confirm with the OK touchpad	The display shows the sub-menus Format and Set manually.
Format	Select the desired option and confirm with the OK touchpad.	Display options: 24 h Clock or 12 h Clock.
Set Manually	Set the time (first hours and then minutes) with the + and – buttons and confirm with the OK touchpad. Alternatively, to go back one level, press the C (Clear) touchpad.	Entry prompts are given
Tab type or detergent setting	Select Tab type or Detergent type (from software version ID no. 984). Make the desired selection and confirm with the OK touchpad.	The display shows the following options for the detergent type: Normal (power detergent) 2 in 1, 3 in 1 or Liquid detergent (from software version ID no. 984) *4.
Dispensed rinse aid quantity setting	Select Rinse aid. Make the desired setting with the + and – buttons and confirm with the OK touchpad.	The display shows the current rinse aid dispensed quantity setting. Setting range: 0 ml – 6 ml. Standard setting: 3 ml.
Interval between filter checks setting	Select Check filters. Make the desired selection and confirm with the OK touchpad.	The display shows the number of wash programs between filter checks. Setting range: 30 – 60 wash programs.
Sensor wash program modification (from software version ID no. 984)	Select Adjust sensor wash. Make the desired selection and confirm with the OK touchpad.	The display shows the options on and off (standard setting). This function is used to adjust the Sensor wash program parameters so it can be used to wash items with stubborn stains even if the overall level of soiling is otherwise low.
Main menu modification	Select Change main menu. Select the desired program for position 1. Press the Continue touchpad. Proceed similarly for position 2. After completing the desired changes, confirm the selection with the Finished touchpad and return to the main menu.	The display shows the programs available. The order of the first two can be modified. After fixing and confirming a new order, the list is shown again.

Table 6-54: G2830 Programming Mode Options (Continued on Table 6-55).

Function	Programming	Display
Saving extras	Select Save extras. Make the desired selection and confirm with the OK touchpad.	This function is activated as standard. This is indicated in the display by On. If the function is not desired, select Off.
System lock activation	Select System lock. Make the desired selection and confirm with the OK touchpad.	This function is deactivated as standard. This is indicated in the display by Off. If the function is desired, select On.
In operation lock	Select In operation lock. Make the desired selection and confirm with the OK touchpad.	The display shows the setting options Permitted *1 and Not possible
Temperature setting	Select Temperature. Make the desired selection and confirm with the OK touchpad.	The options °C and °F are available
Buzzer activation / deactivation and volume setting	Select Buzzer. Make the desired selection and confirm with the OK touchpad.	The display shows the options Off, Normal and Loud
Audible confirmation signal activation / deactivation	Select Keypad tone. Make the desired selection and confirm with the OK touchpad.	An audible confirmation signal when a touchpad is pressed is active as standard. This is indicated in the display by On. If the function is not desired, select Off
Brightness setting	Select Brightness. Press the Dimmer or Brighter buttons as appropriate to make the desired selection and confirm with the OK touchpad.	The display brightness range has 17 steps shown in bar form. Standard setting: 8.
Contrast setting	Select Contrast. Make the desired selection and confirm with the OK touchpad.	The display contrast range has 17 steps shown in bar form. Standard setting: 8.
Standby activation / deactivation	Select Standby. Make the desired selection and confirm with the OK touchpad. The display is switched off after approx. 10 min. if no activity is noted. Press any touchpad to reactivate the display.	The display shows the options On and Not in current program.
Memory activation / deactivation	Select Memory. Make the desired selection and confirm with the OK touchpad.	The display shows the options On (standard setting) and Off. The memory function can be used to save the most recently selected program.
Dealer demonstration mode activation.	Select Dealer. Make the desired selection and confirm with the OK touchpad.	The display shows the options Demo program, Demo in cont. loop and Demo with sound. In addition the option Off is available to deactivate the mode.

Table 6-55: G2830 Programming Mode Options (Cont. from Table 6-54) (Cont. on Table 6-56)

Function	Programming	Display
Resetting standard settings	Select Factory default. If all parameters that can be modified by the customer (extras and settings) should be reset to the standard settings, press the OK touchpad. Otherwise, press the Back touchpad to go back one level.	The display shows Reset factory default settings?
Wash/Final rinse temperature modification (from software version ID no. 984).	Select Temperatures then select the desired sub-menu.	The display shows the options Main wash and Final rinse. This increases the main wash or final rinse temperature with a running time extension.
Main wash	Make the desired selection and confirm with the OK touchpad	The display shows the options Normal and Increased
Final rinse	Make the desired selection and confirm with the OK touchpad	The display shows the options Normal and Increased
Water quantity normal / increased	Select Water plus. Make the desired selection and confirm with the OK touchpad	The display shows the options Normal and Increased
Sensor softener activation / deactivation, water hardness manual setting	Select Water hardness. Make the desired selection and confirm with the OK touchpad	Automatic = sensor softener activated. Alternatively the on-site water hardness can be directly selected. Setting range: 1°d to 70°d (°d = Degree of German hardness). See Table 6.2.
Program running time reduction (from software version ID no. 984)	Select Shorten the program. Make the desired selection and confirm with the OK touchpad.	The display shows the options On and Off (standard setting). This offers a program-dependent running time reduction by reducing temperatures and/or canceling holding times.
Second interim rinse selection (from software version ID no. 984)	Select 2nd interim rinse. Make the desired selection and confirm with the OK touchpad.	The display shows the options On and Off (standard setting)
Machine height setting *2	Select Appliance height. Make the desired selection and confirm with the OK touchpad.	The display shows the options Normal (G 1xxx) and XXL (G2xxx)
Country variant setting *2	Select Country version. Make the desired selection and confirm with the OK touchpad.	Setting options: EUR = Europe, AUS = Australia, USA, JPN = Japan, I/E = Italy/Spain, SER = Southern Europe *3

Table 6-56: G2830 Programming Mode Options (Continued from Table 6-55).

*1 If Permitted is selected, locking during operation is possible. However, locking can only be carried out after a program has been started, see the appropriate operating instructions.

*2 If the electronic unit is replaced during service work, it must be programmed as follows: First set the country variant and model variant, then switch off the unit, repeat the accessing procedure and set the machine height.

*3 The SER variant includes the following countries: Portugal, France, Netherlands, Belgium and Great Britain.

*4 From software version ID no. 984 the display Tab type has been superseded by Detergent type.

Save and quit
Switch off the unit.

6.6.2 G2830 – Service Mode

Initial requirements
1. Close the door.
2. Switch off the machine.

Accessing
1. Press and hold the **C (Clear)** button or touchpad.
2. Switch on the machine.
3. Release the **C (Clear)** button or touchpad.
4. Immediately press and release the **C (Clear)** button or touchpad 3 times, at the 3rd time hold for at least 4 seconds.

Acknowledgement Indicator
Successful accessing of the Service mode is indicated by the LEDs, which are all off and the indication **Service program** shown in the right of the display.

The display shows two parameters at the same time.

Use the cursor buttons as appropriate to scroll the display.

Options
Refer to Table: 6-57

Function	Programming	Display
ID no. check	Select ID Number. To return to the main menu, press the OK touchpad.	The display shows version ID no. for the selection-display module (BAE) *1 and control-power module (SLT) *2
Fault memory display	Select Fault memory. To return to the main menu, press the OK touchpad.	The display shows saved fault messages. If several faults have been registered, they will be indicated one after the other. For a fault code summary, see 6.7, Fault code summary. Alternatively, No fault is displayed.
Fault memory deletion	Select Fault memory. Select the option Delete fault memory? With the cursor touchpad, then press the OK touchpad.	In addition to the fault messages, the option Delete fault memory? Is displayed.
Component test	Select component. Individual components V01 – V17 can be selected via the cursor touchpad. To return to the main menu, press the C (Clear) touchpad.	The display shows the components and mini programs that can be activated with wiring diagram abbreviations. They can be selected via the cursor touchpad. After 2 sec. the appropriate test program starts, see 6.6.3, Component test.
Operating hours check	Select Operating hours. To return to the main menu, press the OK touchpad.	The display shows the number of operating hours
Operation: LED test	Select Operation. Select the option B01: LED test. To return to the main menu, press the C (Clear) button or touchpad.	All LEDs and the display light up
Operation: Buzzer test	Select Operation. Select the option B02: Buzzer test. To return to the main menu, press the C (Clear) button or touchpad.	The buzzer is activated

Table 6-57: G2830 Service Mode Options

*1 Selection-display module

*2 Control-power module

Quit (without saving)
Switch off the unit.

6.6.3 G2830 Component Test

After selecting the service mode and successfully accessing the component test program, individual electrical components can be activated via the program button (Start/Stop for Integrated models). During this procedure, certain components can only be activated via special mini-programs.

Test sequence and background information:

V01. R1, Y2, M6, …, wash sequence with heating (mini-program):
This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. At the same time the water inlet valve is activated, the slide shutter is set to the middle spray arm position. After 2.7 l has been registered, the EGS (electronically controlled water softener) valve is also opened until the total desired intake quantity has been reached. The circulation pump with switched auxiliary winding is then operated. At the same time the slide shutter is activated with its setting alternating at 15 sec. intervals. After a further 60 sec., the heating relay is switched on for 300 sec. and the water is heated to 122°F. The mini-program ends with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off).

Note
The mini-program does not include any fault testing function.

V02. 1K1, heating relay:
The heating relay is activated for 60 sec.

V03. M8, drain pump:
The drain pump is activated for 60 sec.

V04. Y2, Y5, water inlet valves with EGS (electronically controlled water softener) valve (mini-program):

The water inlet valve is activated (on models with and without slide shutter) until 5.4 l has been taken in. After 2.7 l has been registered, the EGS valve is also opened until the total desired intake quantity has been reached.

Warning!
If the flow meter is defective, the EGS valve is not activated.

V05. Y5, EGS valve:
The EGS valve is activated for 60 sec.

V06. M6, circulation pump switched winding relay:
The circulation pump with switched auxiliary winding is activated. With a controlled circulation pump, the activation is at the maximum speed for controlled operation. The circulation pump is activated for 30 sec., but the auxiliary winding relay is only activated during the first 15 sec.

Warning!
The circulation pump must not run for more than 30 sec. without water.

Note
During the period when the auxiliary winding relay is activated, a higher circulation pump current of approx. 0.9 A flows. Afterwards the current is approx. 0.16 A.

V07. M24, M6, slide shutter at middle spray arm setting with circulation pump:

The slide shutter is activated and set to the top/bottom spray arm setting. The circulation pump is then operated for 30 sec. at the maximum speed for controlled operation.

V08. M24, M6 The slide shutter at top/bottom spray arm with pump

The slide shutter and set to top/bottom spray arm setting. The circulation pump is then activated for 30 sec. at the maximum speed for controlled operation.

V09. M24, The slide shutter:
The slide shutter is activated for 60 sec.

V10. Y50, combination dispenser:

The combination dispenser is activated with pulsed operation for 60 sec. The pulse rhythm throughout the test period is 10 sec. on / 10 sec. off.

V11. Y38, Y2, Y5, …, reactivation sequence (mini program):

This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve with EGS (electronically controlled water softener) valve is then activated until 250 ml has been reached or 60 sec. has elapsed. The SIT brine valve Y60 is then activated for 150 sec. The reactivation valve is then activated for 120 sec. Following this the water inlet valve and the drain pump, which begins with pulsed priming (2 sec. on / 2 sec. off), are operated together for 60 sec.

Starting with software version ID 984 the reactivation component test operates as follows:

At the start of the mini-program the drain pump M8, water inlet valve Y2 and EGS valve Y5 are activated at the same time. M8 pumps water for 30 sec. and is primed with pulsed priming (2 sec. on/2 sec. off). Y2 and Y5 are switched off when 250 ml has been reached or 60 sec. has elapsed. The reactivation valve Y38 is then activated for 150 sec. following this, the water inlet valve and the drain pump, which begins without pulsed priming (2 sec. on/2 sec. off), are operated together for 60 sec.

Warning!
If the reactivation mini program has been started, it must not be cancelled prematurely. If it is interrupted, there is a risk that brine will overflow out of the SIT, salt container in door, into the machine cabinet.

V12. Y60, Brine valve (salt container in door (SIT) valve):

The brine valve is activated for 60 sec.

V13. Y38, reactivation valve:

The reactivation valve is activated for 60 sec.

V14. M2, fan:

The fan is activated for 60 sec.

V15. B3/9, M6, circulation pump with Speed sensor

The circulation pump with switched auxiliary winding is activated for 30 sec. at maximum speed. If the desired speed has not been reached within 7 sec., the circulation pump remains station

V16. 4N1, M6, wash sequence with middle spray arm sensor (miniprogram):

This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. Concurrently with water inlet valve activation, the slide shutter is set to the middle spray arm position. The circulation pump with switched auxiliary winding is then operated. If a spray arm fault is registered during circulation pump operation, the pump is switched off after 60 sec., otherwise if operates for an additional 120 sec.

V17. 5N1, M6, wash sequence with bottom spray arm sensor

(miniprogram):

This starts with 30 sec. drainage, which begins with pulsed priming (2 sec. on / 2 sec. off). The water inlet valve is then activated (on models with and without slide shutter) until 5.4 l has been taken in. At the same time the water inlet valve is activated, the slide shutter is set to the middle spray arm position. The circulation pump with switched auxiliary winding is then operated. After 2 sec. the slide shutter is set to the top/bottom spray arm position. If a spray arm fault is registered during circulation pump operation, the pump is switched off after 60 sec., otherwise it operates for a further 120 sec.

6.7 Fault Code Summary

Important
Not all fault codes apply to all model numbers

Faulty Code	Summary
F00	No faults
F01	Water/Heating NTC temperature sensor or leads short-circuited
F02	Water/Heating NTC temperature sensor or leads open-circuited
F11	Drainage fault
F12	Water intake fault at start of step
F13	Water intake fault at end of step
F14	Water intake fault: Heater pressure switch
F15	Water intake fault: Hot water
F18	Flow meter stationary state monitor
F19	Flow meter stiff and not turning freely
F24	Heating relay contact
F25	Desired temperature fault
F26	Boiling protection
F40	Electronic unit fault
F42	Mains frequency registration fault
F47	Interface fault (BAE) and (SLT)
F51	Heater pressure switch
F52	Heater pressure switch has reset during heating
F53	Speed sensor fault
F63	Slide shutter fault
F67	Circulation pump speed too low
F68	Circulation pump operation after switch-off
F69	Circulation pump blocked
F70	Float switch fault
F84	Slide shutter positioning fault
F85	Slide shutter signal change fault
F86	Salt container lid contact fault
F87	Sensor softener fault
F88	Turbidity sensor fault
F91	Load size registration inactive

Table 6-58: Fault Code Summary

6.8 Fault Repair Summary

6.8.1 No Power - Main Switch Is On

1. Check for 120 VAC from wall outlet. If hard wired check for voltage at terminal X3/1. If no voltage is present, check:
   a. Circuit Breaker Panel or “Fuse Box.
   b. If hard wired check for proper connection at terminal X3/1
2. Check for power to the electronic unit.
   a. If power is present, go to step 3.
   b. If no power is present, check wire continuity between electronic board and terminal X3/1.
3. Check main switch S2.
   a. If switch is inoperative, replace switch. For units where the switch is part of the electronic board. Replace the electronic board.
4. Check the door contact switch S24.
   a. If the door contact switch has power, replace the electronic board.

6.8.2 Display shows “Close Salt Reservoir Cap”

Fault code **F86** is logged in fault memory
The reed switch is open. The display shows Close salt reservoir cap.

1. Insure the salt container lid on inside door is closed.
2. Check to see if the magnet is missing off of lid. Replace container lid if magnet is missing.
3. Check reed switch and connections. Replace reed switch if necessary.

6.8.3 Drain Pump Switches On and Off at Short Intervals

The drain pump operates with 1 sec. on and 4 sec. off

a. Electronic unit fault, replace the electronic unit.

6.8.4 Inlet / Drain LED Flashes and Lights up Alternately (Fully Integrated)

On-site water supply valve closed.

a. Open water supply valve.

1. Check Filter in WPS (WaterProof System) for blockage.
   a. Disconnect the dishwasher from the power supply.
   b. Close the water supply valve.
   c. Unscrew the WaterProof System from the water supply valve.
   d. Remover the washer from the threaded union.
   e. Remove the filter with needle nose pliers.
   f. Clean or exchange the filter as necessary.

6.8.5 Dishwasher Program Can Be Selected But Not Started

After switch-on, display is normal and LEDs light up/flash as usual. When a dishwashing program is selected, it cannot be started.

1. Incorrect positioning of adjustable door lock latch.
   a. Adjust the locking plate (5.2.9).
2. Door seal incorrectly seated.
   a. Check the door seating and adjust as necessary (5.3.1).

6.8.6 Dishwashing program interrupted, no fault indication

Selected dishwashing program interrupted suddenly because door contact switch is no longer closed, No fault is displayed and no fault is registered in the fault code memory.

1. Incorrect positioning of adjustable door lock latch.
   a. Adjust the locking plate (5.2.9).
2. Door seal incorrectly seated.
   a. Check the door seating and adjust as necessary (5.3.1).

6.8.7 Door does not close correctly

1. Incorrectly fitted Stopper at end of Top Basket Guide.
   a. Remove the Stopper and fit it correctly.
2. Door Seal incorrectly fitted and protrudes forward.
   a. Remove the Door Seal and fit it correctly (5.3.1).
3. Damaged Door Hinges
   a. Inspect and replace Hinges as necessary (5.2.5).
4. Locking latch is in the wrong position (Integrated models)
   a. Press door lock release.
5. Locking bolt is in the wrong position (Fully Integrated models)
   a. Activate the door lock emergency release (5.2.13).

6.8.8 Condensation forms on adjacent cabinets

During the drying cycle, condensation may form on the cabinets to the left and right of the dishwasher.

1. Extraneous air is sucked in the area of the condenser.
   a. Remove right side panel (5.1.1).
   b. Seal the opening behind the rib of the condenser with silicone sealer (for example Thermostat) see Fig. 6-1.
2. Modify the dishwasher with conversion kit “Vapors VI”

Note
In dishwashers starting with production number 33/65009505 the opening at the condenser pocket is already closed.

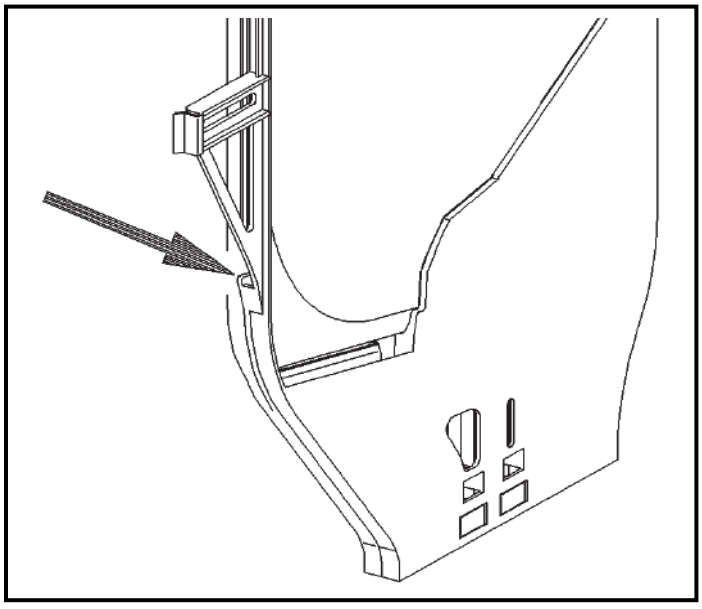


Figure 6-1: Condenser pocket

6.8.9 Noises during drying cycle

After the fan is switched on, there may be noises during the drying cycle.

1. Fan impeller not firmly mounted.
   a. Replace the fan (5.3.7).

6.8.10 Foreign object in drain system

The drain pump or the non-return valve is blocked by a foreign object.

1. Insure the ring to the filter trap is properly fitted with the microfine filter housing, Mat No. 5672961 (refer to Fig. 6-2)

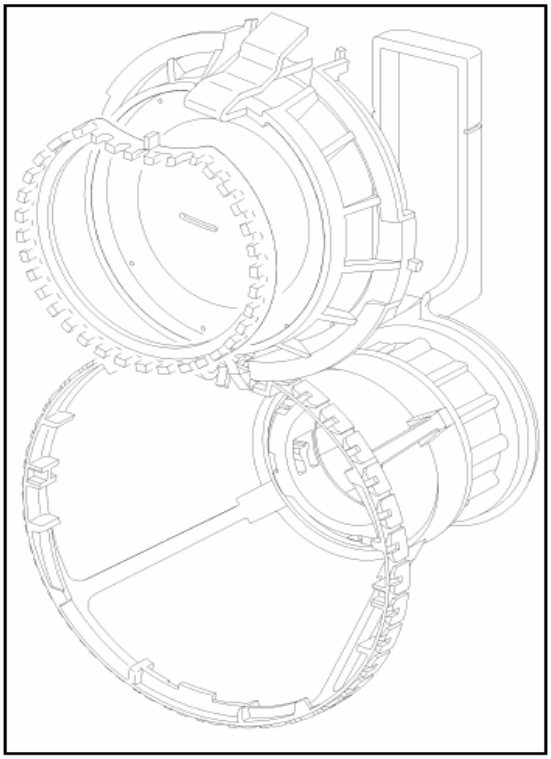


Figure 6-2: Microfine filter trap.

Note
Once the ring is fitted, cleaning the filter has to be done in shorter

Note
For remedies to clear blockage see Fault code F11 “Drainage fault”, 6.8.13.

6.8.11 Poor Drying Results

1. Incorrect Dispenser setting.
   a. Adjust setting as necessary.
2. Rinse Aid Dispenser Flap not properly closed. The Rinse Aid Container filed with water during program operation.
   a. Flush the Dispenser, refill with new Rinse Aid.
   b. Replace Dispenser Assembly as necessary (5.2.6).
3. Rinse Aid not being dispensed/released.
   a. Ensure Dispenser is operating. Replace Combination Dispenser as necessary.
4. Combination products are being used, and the function “2in1” or “3in1” is selected. After a time, the drying results become poor. All rinse aid remnants were flushed from the dispensing unit (for background information refer to the section “intelligent tab function”). Thus only the rinse aid components of the combination product are available for the drying cycle.
   a. Check the fill level of the rinse aid in the dispensing unit.
   b. Refill with standard rinse aid.

6.8.12 No Drying Or Drying Too Slow

1. Fan run-on time too short. (If applicable)
   a. Extend the Fan run on time. See applicable programming mode.
2. Fan not functioning
   a. Check circuit, perform service as necessary.
3. No Heat, Fault Code **F01, F02, F25, or F52**. After this fault is registered, the heating will not be activated, no rinse aid is dispensed. May also note that dishes are still dirty.
   a. NTC temperature sensor R30 or its connection leads short-circuited **(F01)**.
   b. Check the plug connections
   c. Check the temperature sensor and its leads for continuity. At 68°F (20°C) the temperature sensor resistance should be approx. 14.9Ω (±600Ω) and at 77°F (25°C) approx. 12Ω (±600Ω) (guide figures only).
   d. Replace the NTC Temperature sensor if necessary (5.4.19).
4. Water/Heating NTC temperature sensor or leads open-circuited **(F02)**.
   a. Check plug connections
   b. Check the temperature sensor and its leads for continuity.
   c. Replace the NTC temperature sensor if necessary (5.4.19).

5. Heating element defective **(F25)**.
   a. Replace the heating element
6. Heating relay defective **(F25)**.
   a. Check the heating relay solenoid voltage (12 VDC) from the electronic unit.
   b. If no voltage is present, replace the electronic unit.
   c. Check the heating relay solenoid. Replace if necessary.
7. Excess quantity of detergent or rinse aid dispensed. Excess foam has developed **(F25)**.
   a. Check the dispensed quantities of detergent and rinse aid. Follow the information given in the operating instructions.
8. Heater pressure switch has reset during heating **(F52)**. The program continues from the wash block in which the fault is registered without the heating being activated. The fault will only be indicated in the display or via LEDs at the end of the program. The buzzer is then activated for 2 min.

The switching of the Heater pressure switch during the wash cycle may cause this fault to occur. The causes and remedies are as follows:

a. Check for excess quantity of detergent or rinse aid dispensed. Excess foam can cause a drop in water flow pressure, directly affecting the Heater pressure switch. Clean out excess form and follow the information given in the operating instructions.

Note
A check should also be made to ensure that the type of detergent used matches the setting made, see Tab type or detergent setting. When, for example, combination products (**2 in 1** or **3 in 1** tablets) are used but the Tab type has not been set, rinse aid will be dispensed twice.

b. Check for proper water level (just below the Filter assembly locking arm) and circulation.
c. If circulation pressure is low, check the circulation pump for any foreign objects that may be present. Clean or replace as necessary.
d. If the water level is far below the filter assembly locking arm. Check for items that may have tipped over and retained a large quantity of water, e.g. in a bowl. Follow the loading information given in the operating instructions.
e. If proper circulation is available, check connections at the heater pressure switch and ST5 on the electronic board. If 120 VAC power is present or intermittent, clean or replace the Heater pressure switch as necessary.

6.8.13 Water Present In Appliance And Is Not Being Drained Off

1. Drain Blocked **(F11)**

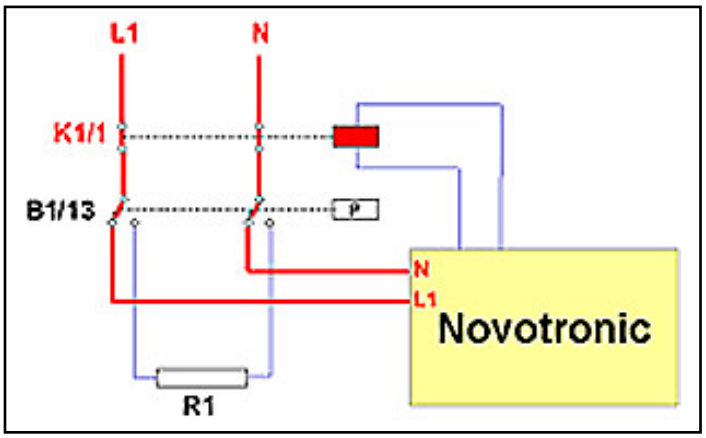


Figure 6-3: Circuit test path for **F11**.

After each drain pump step, the circulation pump operates for 2 sec. and the heater pressure switch checks the water level. If it is too high (Large quantity of residual water remaining in cabinet), the drainage time is extended. If, after a further check, the water level is still too high, the program is interrupted, fault code **F11** is saved and the drain pump is activated.

2. Check for proper water flow from drain line by performing the following steps:
   a. Disconnect drain line from drain trap, garbage disposal, or drain pipe and place in bucket or large container.
   b. Insure that adequate water is in the dishwasher cabinet. Select and start a new washing program (First step should be a 30 sec. drain). Insure the drain hose is held in place within the bucket or container.

      - If water flows from the drain hose. Dishwasher is not the cause of the blockage. Blockage is in the piping and should be checked by a specialist.

      - If water does not flow from the drain hose then proceed to the next step.

3. Check filters for blockage.
4. Check the non-return valve for blockage, clean or replace if necessary.

5. With the non-return valve removed, check the drain pump for proper operation by performing the following steps:
   a. Check the Drain pump Impeller blades for proper rotation. If stuck, look for Foreign objects blocking Impeller blades and remove. If Impeller blades are jammed and no foreign objects are located, proceed to next step.
   b. Remove the lower service door panel.
   c. Operate the dishwasher in a draining step.
   d. Check for power at the Drain pump. If pump is receiving power,
6. Drain hose kinked.
   a. Replace Drain hose
7. Check the heater pressure switch and insure the contacts are in the correct position after drain. replace if necessary.

6.8.14 Inlet/Drain LED Flashes During Water Intake, Dishwasher ends selected program. (F12, F13 or F19)

1. Check if On-site water supply valve is closed.
   a. Open the water supply valve
2. Check if On-site water supply has low water pressure, less than 14.5 psi.
   a. The on-site water supply should be checked by a specialist.
3. Check the WPS (WaterProof System) valve Filter for blockage by performing the following steps:
   a. Disconnect the dishwasher from the power supply.
   b. Close the water supply valve.
   c. Unscrew the WaterProof System from the water supply valve.
   d. Remove the washer from the threaded union.
   e. Remove the filter with needle nose pliers.
   f. Clean or replace the filter as necessary.
4. Check Water inlet valve for proper operation by performing the following steps:
   a. Insure water supply is open and there is access to the valve housing.
   b. Select a wash program and start.
   c. After the drain step (30 sec.) the water inlet step will begin. Hold you hand around the valve housing. If you feel a mild vibration, then the valve is receiving power. Replace the WPS valve (Y2). If not go to the next step.
   d. Remove bottom drip pan and check the electrical connector to the inlet valves mounted on the left plinth for power. If power is available troubleshoot connector and wiring accordingly. If not go to the next step.
   e. Check for power coming off the electronic board. If no power, replace the electronic board. If power is present, check wiring from electronic board to electrical connector. Replace and repair as necessary.

5. Check the Flow meter B3/4 for too few pulses **(F13)**, no pulses **(F12)** or sluggish movement **(F19)** by performing the following steps:
   a. Remove the left side panel (5.1.1).
   b. Check that the plate with the reed switch on the flow meter is seated correctly.
   c. Check that the reed switch connection plug is seated correctly.

   - If **F12, F13** or **F19** is displayed, disconnect the electrical connector from the electronic board and hook up a multi meter set for continuity.

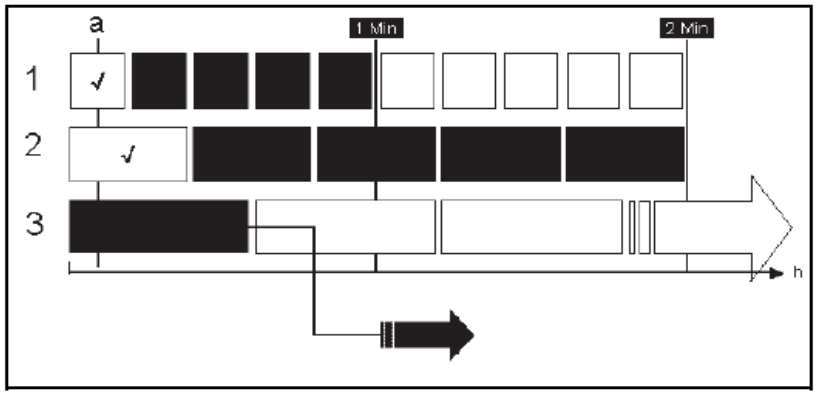
   d. While in operation:

   - If no pulses are delivered, take a magnet and pass it over the reed switch. If a pulse is delivered, replace the water diverter. If no pulse is delivered, replace the reed switch.

   - If pulses are delivered. Connect the electrical connector to the electronic board, clear the fault and operate the appliance. If an **F12** is displayed replace the electronic board.

Fault **F19** will be displayed if the check to test the sluggish movement of the flowmeter (impeller counter) during the water intake is not successful.

Start rinse block water intake:



- Item a: Test time for one liter.
- Item 1: Sufficient normal water intake time.
- Item 2: Extended water intake time required.
- Item 3: After a water intake of 1 liter, it becomes apparent that neither the normal nor the extended water intake time will be sufficient. Therefore the test routine is started.

Figure 6-4: F19 - Start rinse block water intake

Test routine:

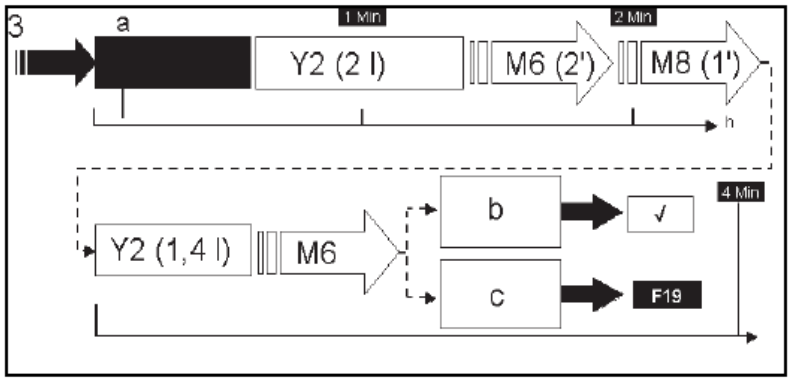


Figure 6-5: F19 – Test routine.

- Item a: Test time for one liter
- If the test routine is successfully completed, water intake time will be extended
- If the test routine is not successfully completed, a Fault code **F19** is registered.

Figure 6-5: F19 – Test routine.

Refer to Fig. 6-5 for following test routine:

a. As a first step, the water intake valve **Y2** is activated, to let an additional 2 liters into the appliance. The time required for this is calculated based on the time the water intake took for the liter already in the unit (see fig. 6-4).

Note
The water volume taken in at this point cannot cause an overflow, even if the flowmeter count is inaccurate.

b. Next the circulation pump M6 is activated for 2 minutes, to wet the dishes in the cabinet and to permit any cavities in the wash load to fill with water. Next the drain pump M8 is activated for 1 minute. Now a base line for the actual test has been created.

c. For the test, water intake valve **Y2** is activated until the determined number of impulses is reached, which correspond roughly to a water volume of 1.4 liters. Subsequently the circulation pump **M6** is activated again.

d. The current program continues without interruption. The maximum water intake time is extended to 4 minutes. This value is shaved in the electronic for future water intakes. If in the future the time necessary for the water intake of 1 liter should deviate from this value (15% less or 15% more) a new test routine has to be started.

e. If however the heater pressure switch B1/13 switches, the wash program is interrupted immediately, the drain pump runs, and Fault **F19** is registered.

6.8.15 Wash Program Is Interrupted And Drain Pump Is Operated

If an F18 fault is displayed
The water inlet valve is open when it should not be (signal to open it has not been given by the electronic module). Water then flows into the appliance and unexpected pulses from the flow meter B3/4 are detected.

1. Check the Water Inlet Valve for proper operation (may be stuck in open position).
   a. Gain access to the water inlet valve.
   b. Start a wash program
   c. Place your hand around the inlet valve during the water inlet step. You should feel a vibration indicating that the valve is energized.
   d. At the end of the water inlet step the valve should be de-energized. If water is still entering the machine, replace the water inlet valve.
   e. Check for interference pulses. Electrical components within the water diverter could be interfering with the pulses produced by the flow meter. Troubleshoot accordingly and replace the water diverter if necessary.

If an F14 fault is displayed
With the circulation pump operating after a water intake step, the heater pressure switch is checked to ensure that sufficient water pressure exists in the wash water circuit. For this the heating relay must have been activated.

1. During a heating step the heater pressure switch may have registered no or insufficient water pressure at the circulation pump.
   a. Check the dispensing of detergent and rinse aid. Excessive foam development means that the pressure at the heater pressure switch will be less.
   b. Check for correct water level within the machine (water level should be just under the filter arm).

   - If incorrect water quantity is registered, see “Inlet/Drain LED flashes during water intake” for troubleshooting steps.

   c. Check the filters for blockage.

d. Check if circulation pump is defective by performing the following steps:
   1. Open the dishwasher door and insert your Miele bypass tool into the latching mechanism.
   2. Turn on the dishwasher and select a wash program.
   3. After the 30 sec. draining step, pay attention to the lower spray arm. As water enters the cabinet the circulation pump should be operating, increasing the water flow pressure. You should begin to see a small flow of water coming out of the lower spray arm.

Warning!
Keep your hands on the door handle as you perform this test. If you see water begin to flow out of the lower spray arm. Press the door handle to pop the bypass tool out of the door lock and shut off the unit. If this is not done, there is the danger of water spraying out of the dishwasher.

- If you see the water flow out of the spray arm the circulation pump is operating and there is no blockage. Press the door handle to pop the bypass tool out of the door lock.

- If you see no water continue with the next step.

4. Check the power supply to the circulation pump.
5. Check the circulation pump capacitor.
6. Check the circulation pump intake for blockage. Clean it as necessary. Check the hose connections.
7. Check the circulation pump housing for foreign objects by performing the following steps:
   a. Remove the bottom drip pan.
   b. Remove the circulation pump (5.4.14).
8. Remove the circulation pump housing cap (5.4.15.1).
9. Check inner housing for blockage.
10. Replace the circulation pump if necessary (5.4.14).
11. Check the heater pressure switch for proper operation by performing the following steps:
    a. Check connection plugs and wiring harness for damage, corrosion or loose connection.
    b. Enter the service mode and select component test.
    c. Select wash sequence with heating (R1,Y2,M6).
    d. Provide access to the control electronic board.
    e. Using a multi meter, place the probes onto the heater pressure switch sensing leads off of connector ST5 on the electronic board. During circulation pump operation you should read no voltage at these points.

       - If 120 VAC is measured, replace the heater pressure switch (5.4.15.7).

If An F24 fault is displayed
18 sec. after starting the drain sequence the electronic board will perform an operational test on the **heater relay**. The circulation pump is not operating and no power is applied to the heater relay coil. If 120 VAC is registered at ST5 on the electronic board, then an **F24** is logged in memory (see Fig. 6-6).

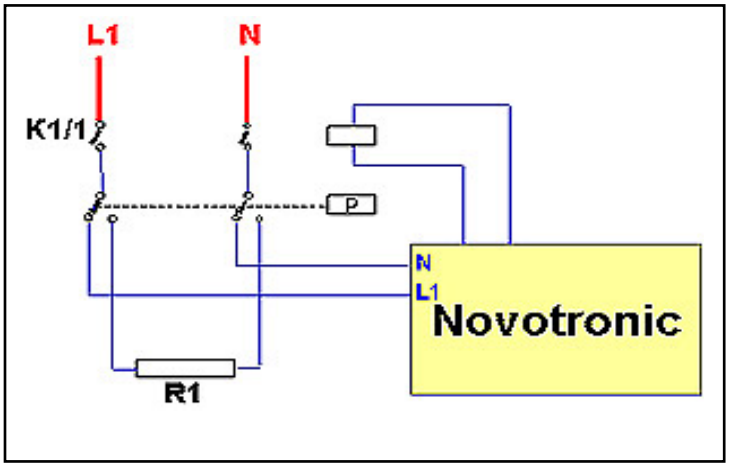


Figure 6-6: Circuit test path for **F24**.

1. Check the heater relay contacts to see if they have been fused together. Replace if necessary.
2. Check for defects to the connecter at the output side of the heater relay. Corrosion buildup can cause a bridge between contacts, which can reduce the transfer resistance below a value of 10 MΩ. This check can be done by performing the following steps:
   a. Disconnect the appliance from power.
   b. Pull Plug ST5 off the electronic board.
   c. Measure the resistance between the connectors of the evaluation leads on the heater pressure switch, point 12 and 22, at the plug ST5 of the electronic board.
   d. If the measured resistance is below 10Ω, the heater partial wiring harness has to be replaced.

If a F26 fault is displayed
If water enters the machine exceeding 194°F, the program is interrupted and the drain pump is operated. The fault will be indicated on the display or via LEDs.

1. If the NTC temperature sensor has exceeded 194°F, check the heating relay to see if its fused closed and replace if necessary.
2. If the NTC temperature sensor is providing inaccurate information, replace the temperature sensor (5.4.19).

If a F40 fault is displayed
The electronic unit has a fault that cannot be repaired by the Service Dept. (e.g. hardware fault)

1. Replace the electronic unit (5.5.3).

If a F42 fault is displayed
A check ID carried out to ensure that the power frequency is within certain valid ranges (50 ± 5 Hz or 60 ± 5 Hz). This fault is registered when it cannot clearly be established which valid range is applicable.

1. On-site power fluctuations should be checked by a specialist.

If a F47 fault is displayed
Communication between selection-display module (BAE) and Control-power module (SLT) becomes faulty.

1. Replace the electronic unit (5.5.3).

If a F51 fault is displayed
Initial state:

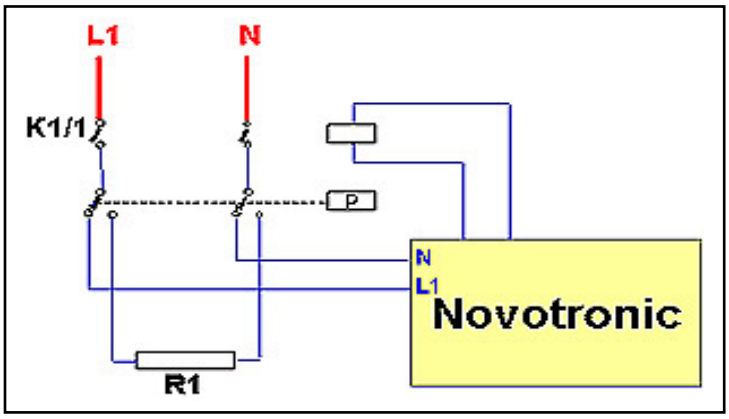


Figure 6-7: Circuit test path for **F-51** (initial state)
1 sec. after program start (machine will be in the initial 30 sec. draining process), the following test is carried out: Heater relay K1/1 is switched on. This tests whether the contacts of the heater pressure switch B1/13 at points 21/22 or 11/12 are closed. If the electronic board receives no power an **F-51** fault is stored.

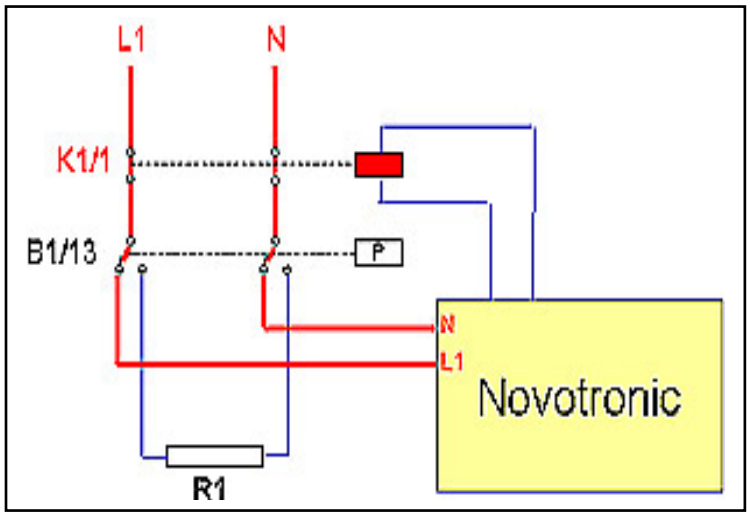


Figure 6-8: Circuit test path for **F-51** (testing state)

1. Check the Heater relay for an open contact. If the relay is open during the testing state, Fig. 6-8. Then perform the following checks:
   a. Check to insure all plug connections are clean and secure.
   b. Check the connection wires for continuity.

   - If the Heater relay still shows an open contact, replace the Heater relay.

2. Insure the Heater pressure switch is in position 21/22 and 11/12. If not, perform the following checks:
   a. Check to insure all plug connections are clean and secure.
   b. Check the connection wires for continuity.
   c. Remove the Heater pressure switch and check for any blockage

   - If the Heater pressure switch still shows an open circuit. Replace the Heater pressure switch.

If a F68 fault is displayed
The speed sensor registers that the circulation pump is still operating even after it has been switched off.

1. Check connectors to circulation pump speed sensor and electronic board.
2. Perform a continuity check to insure there is no open circuit.
3. Replace the speed sensor and perform an operational check.

   - If the fault is again displayed, replace the electronic board.

If a F69 is displayed (circulation pump blocked)
With the circulation pump operating, the pump pressure level switch contacts are checked. For this the heating relay must have been activated and both electronic unit inputs must be potential free.

1. Check for proper operation of the heater relay, see **F25** Heating relay defective.
2. Check for proper operation of the heater pressure switch, see **F14** Water intake fault: Heater pressure switch.
3. Check the circulation pump for proper operation, see **F67** Circulation pump speed too low.

If a F70 is displayed (Float switch fault)
The drain pump continues to operate do to the changeover contact of the float switch B8/3 closed from 1 to 4 (refer to the wiring diagram). Even after the appliance has been switched off, the drain pump can only be deactivated by disconnecting the appliance from the power source.

1. Disconnect the appliance from the power source and remove the water from the drip pan.
2. If there is no water, check for debris beneath the float switch Styrofoam.
3. Check the drip pan for any warps or dents that may have occurred due to transport. Bend straight or replace as necessary.
4. Operate the appliance and check the unit for any oversudzing. Also check all hoses, connections and threaded unions for leaks.
5. Check the float switch for continuity and correct operation. Replace float switch if necessary.
6. Carefully dry all electrical components in the drip pan area.

If a F84 is displayed (Slide shutter positioning fault)
The electronic board is unable to read the position of the slide shutter through the position switch. This fault is displayed when attempts to position the slide shutter have failed. See **F63 (Slide shutter fault)** for troubleshooting steps.

If a F85 is displayed (Slide shutter signal change fault)
Even though the slide shutter has not been activated, a signal change has been detected at the position switch.

Case 1: If the fault is registered before the circulation pump has been activated for the first time (or before program start), the program is interrupted and the drain pump is operated. The fault will be indicated in the display or via LEDs. The buzzer is activated for 2 min.

Case 2: If the fault is registered later, the fault will be indicated in the display or via LEDs at the end of the program. The buzzer is then activated for 2 min.

1. The cause may lie with the position switch B3/12, which may have an intermittent contact. Check for dirty contacts clean or replace drive as necessary.
2. Check for pulses during operation at ST14 on the electronic board using a multi-meter set for low voltage DC. If you are receiving pulses every 30 sec. then replace the electronic board if you are receiving no pulses, replace the drive.

6.8.16 The program is not interrupted, but faults are logged into the fault memory.

If the following faults are registered, the program is not interrupted. The fault will only be indicated when the fault memory is checked in the service mode.

A water intake fault: hot water is registered (F15)
During the energy saving program if the water temperature is below 100°F an **F15** fault is logged into memory. The on-site water supply should be checked by a specialist.

A Speed Sensor Fault is registered (F53)
The circulation pump continues to operate but is not monitored.

1. Check for popper operation of the circulation pump, see **F14** par. 1e. Clean and remove any blockage that may be present.
2. The speed sensor B3/9 may be defective. Replace speed sensor.

A Slide shutter fault is registered (F63)
Even though the slide shutter motor has been activated, there is no signal change at the position switch. The slide shutter motor will be activated again whenever repositioning is required.

1. Check to see if water is alternating between the upper/lower spray arms and the middle spray arm. This can be done by removing the side panels, selecting a wash program and observing the water flow between the upper spray arm and middle spray arm water paths. If the water flow is alternating go to section “a” below. If not go to section “b” below.

2. Check the position switch B3/12 at connection ST14 (using a multi-meter) for low DC pluses at 30 sec. intervals.

a. If pluses are present, the electronic board needs to be replaced.
b. If pluses are not present, first check wire connections for an open or short circuit. Replace the slide shutter drive if necessary.

3. If the slide shutter gearing or the drive (synchronous motor) is defective. Replace the drive.

Circulation pump speed too low fault is registered (F67).
The check is carried out 10 sec. after the circulation pump has started.

1. Perform a circulation pump test as shown (**F14**, 1e,f,g,i, and j).

   - If the circulation pump is good, replace the speed sensor (5.4.15.8).

Sensor softener fault is registered (F87).
If this fault is registered, an emergency program operates in which the reactivation start time and the switching points for the EGS (electronically controlled water softener) valve are given.

1. Check for approx. 9 VAC to the sensor softener 10N1 electronic module or the data connection open-circuited.
2. Check the Sensor softener electronic module conductivity measurement. If no connection faults exist, replace the water inlet mixer.

Turbidity sensor fault is registered (F88).
If this fault is registered, the program continues with default settings.

1. Check connections to electronic board and the turbidity sensor B3/10 and perform a continuity check.
2. Check the turbidity sensor for correct function. Replace the spray arm feed pipe with turbidity sensor if necessary
3. Check for foreign objects in the measurement path. Remove blockage or replace feed pipe if it is necessary.

Load size registration inactive (F91)
If this fault is registered, the water intake block will operate by taking in the default water quantity. In the subsequent additional fill, the quantity of which will normally depend on the size of the load, will be replaced by a water intake block with fixed water quantity.

1. Check the speed sensor for proper operation. See **F53 Speed sensor fault.**

Revised: 12-2006 - LG