

© ELECTROLUX HOME PRODUCTS
Customer Care - EMEA
Training and Operations Support
Technical Support

Publication
number

599 76 83-94

EN

Edition: 03/2015 - Rev. 01

Washing machines

**with electronic control
system**

EWX11831

EWX14931

**Technical and functional
characteristics**

**THE
INSPIRATION RANGE**

TC4 & TC3

G60

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1 PURPOSE OF THIS MANUAL

The purpose of this manual is to provide service engineers who are already familiar with the repair procedures for traditional washing machines with information regarding washing machines fitted with the EWX11831 and EWX14931 electronic control system

Previous platforms (electronic/mechanical) used a safety pressure switch that checked the minimum water level in the tub, below which the supply to the heating element was interrupted.

The current electronic appliances manufactured (EWX11831 and EWX14931 platform) use a heating element with thermal fuses (inside its branches) for safety, which interrupt in case of temperature overload caused by the water level dropping below the minimum level permitted.

The incorporated NTC probe contacts have a 2.5 mm pitch.

The manual deals with the following topics:

- General characteristics
- Control panel and compatibility between washing programmes and options
- Settings: Demo, Diagnostics
- Alarms
- Technical and functional characteristics
- Access

Low consumption mode

In order to reduce electricity waste when the cycle is not running, the appliances on this platform are designed to enter consumption reduction mode:

“Stand-Off” mode

When the appliance is switched off at the ON/OFF button, it is in the “Stand-Off” or “virtual” off status. The LEDs and the LCD screen are turned off and the sensors are disabled, although the main circuit board and certain electrical components are electrically powered.

“Auto-off” mode

If, after 5 minutes, during the programme selecting phase or after the end of the cycle, the appliance receives no further instructions, it is automatically turned off (for energy savings in conformity with the standards on energy consumption).

All the settings are stored so that when the appliance is turned back on, the programme is ready or if the auto-off mode was triggered after the end of the cycle, the user can see that the cycle ended normally, and can restart it if necessary.

You have to unplug the appliance to cut off the power supply

“Zero Watt” mode

Some appliances are fitted with a circuit (in the main circuit board) called Zero Watt (0 Watt with an actual consumption ~50mW) which cuts off the power supply to the appliance:

- a.) When you press the ON/OFF button to turn off the appliance, the Zero Watt circuit is triggered and cuts off the supply voltage after a few seconds, just long enough to secure the washing machine (motor off, door locked, etc.), the cycle and any options selected are reset, so that the next time the appliance is turned on, it is ready to perform the programme.
(To open the door, you will have to wait one or two minutes for the door safety lock to be released).
- b. If, after 5 minutes, during the programme selecting phase or after the end of the cycle, the appliance receives no further instructions, it is automatically turned off and the Zero Watt circuit which cuts off the supply voltage is triggered (for energy savings in conformity with the standards on energy consumption). All the settings are stored so that when the appliance is turned back on, the programme is ready or if the auto-off mode was triggered after the end of the cycle, the user can see that the cycle ended normally, and can restart it if necessary.

If an alarm goes off when a wash programme is running, the automatic turn off is disabled showing the alarm.

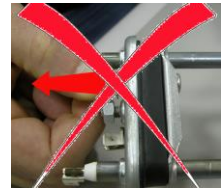
2 WARNINGS



- Any work on electrical appliances must only be carried out by qualified personnel.
- Before carrying out work on the appliance, use suitable instruments to check that the power supply system in the house is fully efficient. For example: refer to the indications provided/illustrated in the <<metrater>> course at the address (<http://electrolux.edvantage.net>) on the Electrolux Learning Gateway portal.

On completing operations, check that the appliance has been restored to the same state of safety as when it came off the assembly line.

- If the circuit board has to be handled/replaced, use the ESD kit (Cod. 405 50 63-95/4) to avoid static electricity from damaging the circuit board, see S.B. No. 599 72 08-09 or consult the course <<Electrostatic charges>> at the address (<http://electrolux.edvantage.net>) on the Electrolux Learning Gateway portal.
- This platform is not fitted with an ON/OFF switch. Before you access internal components, take the plug out of the socket to cut the power supply.
- Make resistance measurements, rather than direct voltage and current measurements
- Warning the sensors located on the display board could be at a potential of 220 Volts.
- When replacing the heating element, replace it with one that has the same characteristics (2 thermal fuses) in order not to compromise the safety of the appliance. NEVER remove/switch the NTC sensors between heating elements.
- Always empty the appliance of all the water before laying it on its side (see the relevant paragraph).
- Never place the appliance on its right side (electronic control system side): some of the water in the detergent dispenser could leak onto the electrical/electronic components and cause these to burn.
- When replacing components, please refer to the code shown in the list of spare parts relating to the appliance.
- Do not place any kind of container under the appliance to catch any drips of water.



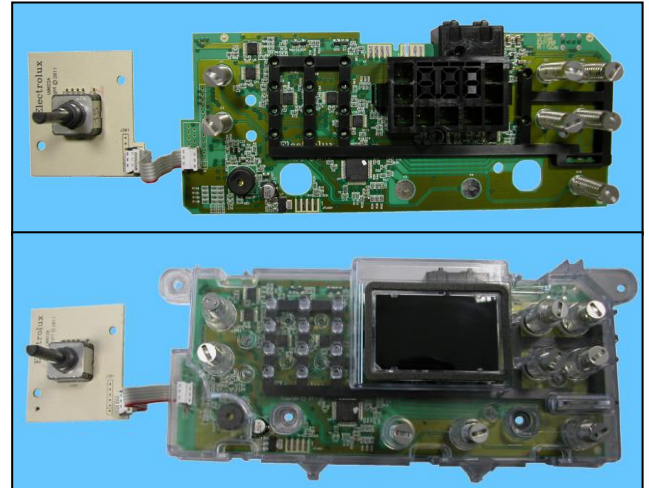
3 TC 4 STYLING

3.1 General characteristics

The EWX11831 and EWX14931 electronic control system consists of two circuit boards plus the motor control system (inverter).

In the event of problems with the touch sensors (difficulty selecting/adjusting them), clean and dry the display and do not wear gloves when setting the chosen programme.

↗ The control/display board, which is inserted in a plastic container fixed to the control panel (the figure shows: the display board with the side socket in which the selector is fixed, connected together by a flat cable, and the display board assembly).



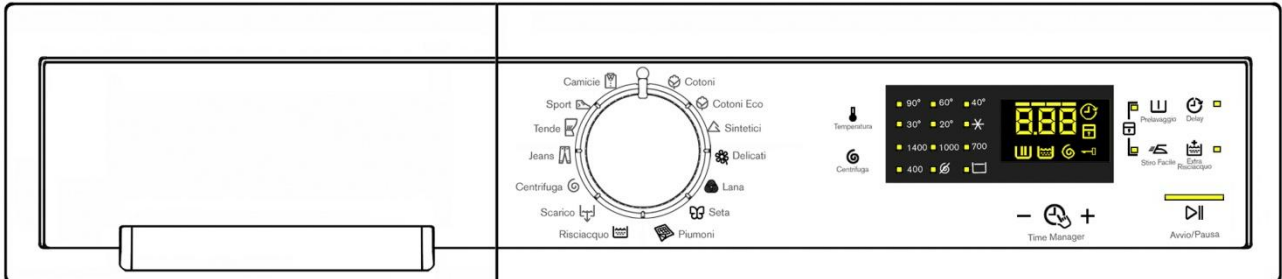
The main circuit board is positioned at the rear of the appliance and receives commands from the display board, powers the electrical components as well as communicating with the motor control board (Inverter)

No. of sensors	▪ maximum 9 (8 options + 1 start/pause)
No. LEDs	▪ maximum 27
Programme selector	▪ 15 positions (incorporated in the circuit board)
Serial port	▪ DAAS-EAP communication protocol up to 115,200 baud
Power supply voltage	▪ 220/240V ▪ 50/60 Hz (configurable)
Washing type	▪ Traditional with "Eco-ball"
Rinsing system	▪ Traditional with "Eco-ball"
Motor	▪ Two-pole asynchronous (three-phase)
Spin speed	▪ 400 ÷ 1,600 rpm
Anti-unbalancing system	▪ AGS
Cold water fill	▪ 1 solenoid valve with 1 inlet – 2 or 3 outlets
Hot water filling	▪ 1 solenoid valve with 1 inlet – 1 outlet
Detergent dispenser	▪ 3 compartments: prewash, wash, conditioners ▪ 4 compartments: prewash, wash, bleaching, conditioners.
Control of water level in the tub	▪ Electronic/analogue pressure switch
Door safety interlock	▪ Instantaneous
Heating element heat output	▪ 1950W with thermal fuses incorporated
Temperature control	▪ NTC probe incorporated in the heating element
Buzzer	▪ Traditional incorporated in the PCB

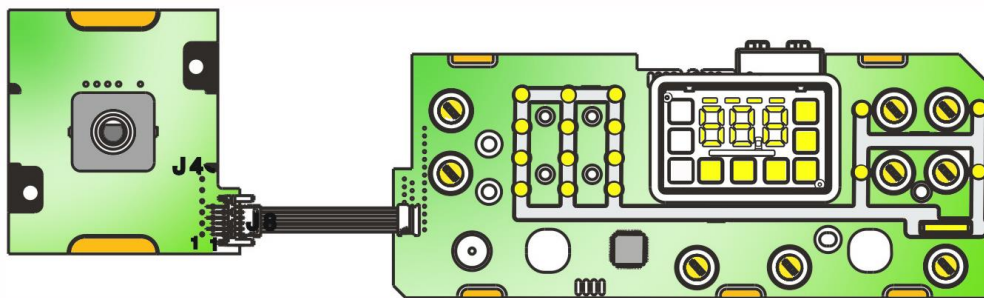
3.2 Control panel

3.2.1 Styling

- Max. 9 touch push buttons
- 15 position programme selector
- 27 yellow LEDs
- Digits made up of 22 LEDs

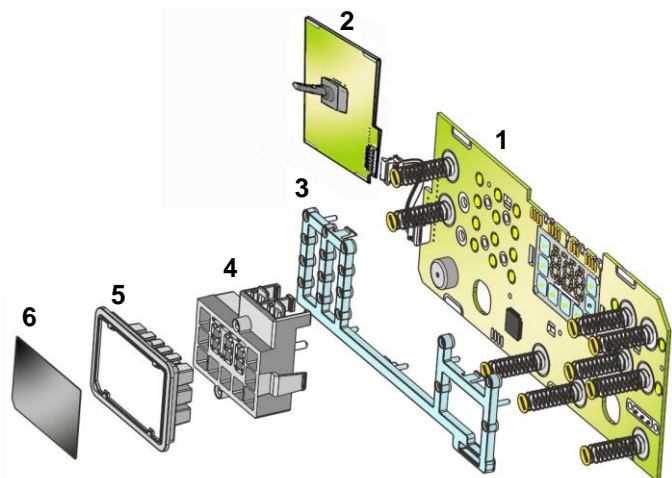


3.2.2 Display board

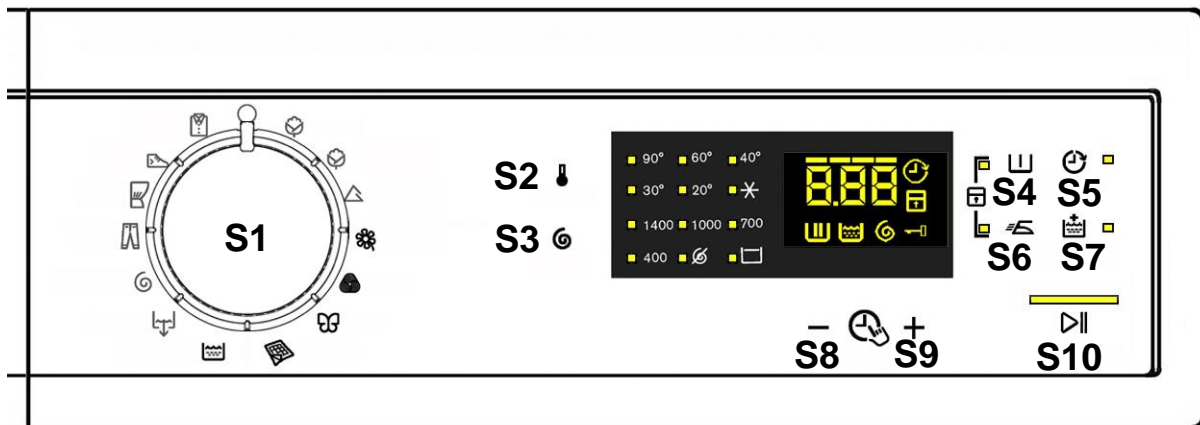


- Display board assembly, exploded view

1. Display board
2. Selector card with knob
3. Light divider
4. Digits light conveyor
5. Digits light diffuser
6. Silk-screen printed digital filter



3.2.3 Control panel configuration



The washing programmes, the functions of the selector knob and the various buttons vary according to the model, since these are determined by the configuration of the appliance.

3.2.3.1 Programme selector (S1)

The knob has 15 non configurable positions.

There is no ON/OFF switch.

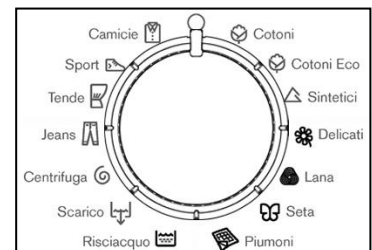
The 0 (zero) position is reserved for resetting the programme that is running and turn off all the LEDs on the display board.

The plug must be removed from the mains socket to cut the power to the appliance.

The various positions of the selector may be configured to perform different washing programmes (e.g. water level, drum movement, no. of rinses and the washing temperature to be selected according to the type of garments).

The selector can be turned both clockwise and anti-clockwise.

For each programme, the compatible options and other parameters are defined. The programme temperature is selected using the relevant sensor.



3.2.3.2 Programme configuration

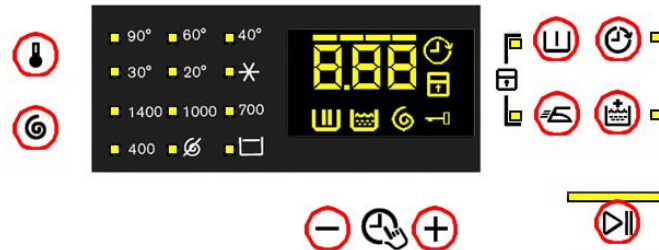
The table below lists the parameters that can be used to define the washing programmes.

Types of fabric	Cotton/linen, Synthetic fabrics, Delicates, Wool, Hand-wash, Shoes, Jeans, Duvet, Silk.
Special programmes	Cotton/linen + pre-wash, Soak, Miniprogramme, Easy-Iron, Conditioner, Rinse, Drain, Spin, Economy.
Temperature	Normal, Minimum, Maximum: the initial temperature is the one proposed by the washing programme.
Spin	Normal, Minimum, Maximum.
Options (Normal/Possible)	Rinse Hold, Pre-wash, Extra Rinse, Easy-Iron, Economy (energy label), Normal, Very short, Reduced Spin Speed, No Spin, Night Cycle, Time Manager 1/2/3/4/5/6/7/8.
Programme phases	Pre-wash, Wash, Rinses, Spin, Delayed start.

3.2.3.3 Sensor functionality

The function of each touch sensor is defined via the configuration of the appliance (the data and images are for guidance only).

The touch sensors are positioned under the silk-screen printed symbols on the control panel (circled here in red)



A light touch on the centre of the symbol is enough to activate/deactivate the function linked to the sensor with the switching on/off of the relative Led confirming that the enabling/disabling has taken place.

Simultaneously to the enabling / disabling of the options, the cycle duration time is updated via the digits.

You need to keep your finger pressed down for a longer period of time with the Start/Pause sensor to confirm both the cycle's start and pause, in order to avoid unwanted starts or accidental pauses.

Every time you touch a sensor, you need to lift your finger up by a centimetre and half a second needs to elapse before touching it again, otherwise the electronic system does not recognise that the sensor has been touched for a second time.

The sensors used for adjusting the: Temperature, Spin, delayed Start and Time Manager have a continued variation of values as long as your finger is in contact with the sensor.

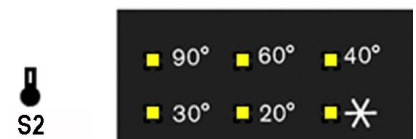
3.2.3.4 Sensor – LEDs and Display

- **Sensor no. 2: TEMPERATURE** (configurable)

The temperature is always associated with the first sensor, in combination with the six LEDs located in the top left hand corner of the display.

The initial temperature displayed is that set for the chosen programme. By touching the sensor you can lower the temperature. Once this has been reached the selection starts again from the highest available one for the selected programme.

The selected temperature is shown by turning on the LEDs near the silk-screen printed value on the control panel.



The temperatures available (displayed in °C) are: **90°C, 60°C, 40°C, 30°C, 20°C cold cycle.**

The cold cycle is indicated by the symbol

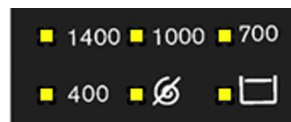


The initial temperature set for each programme can be configured.


The temperature of 50°C is not envisaged.

- **Sensor no. 3:** SPIN SPEED (configurable)

The spin speed is always associated with the second sensor, in combination with the six LEDs located in the bottom left hand corner of the display.



The initial spin speed displayed is that set for the chosen programme.

Touching the sensor you can reduce the spin speed, indicated by the LED near the silk-screen printed value on the control panel coming on. Once the lowest speed has been reached you can, if you wish, select "No spin", "Stop water in tub" lighting up the relative symbol , or "Night cycle" (if compatible with the selected programme).

The next selection will be the highest speed available for the selected programme.

The speeds that can be combined with the six LEDs are shown in the following table.

Max spin speed (rpm)	800	1000	1000	1200	1200÷1400	1200÷1400	1400-1600	1400-1600	1400-1600	1400-1600
Intermediate	600	800	800	800	1000	1000	1200	1200	1200	1200
Intermediate	400	400	600	400	800	800	800	800	1000	1000
Intermediate	No speed	No speed	400	No speed	400	400	400	400	800	800
Intermediate	Rinse hold	Rinse hold	No speed	Rinse hold	Rinse hold	No speed	Rinse hold	No speed	Rinse hold	No speed
Last selection	Night Cycle	Night Cycle	Rinse hold	Night Cycle	Night Cycle	Rinse hold	Night Cycle	Rinse hold	Night Cycle	Rinse hold

- **Sensor no. 4-5-6-7** (configurable)

Each of the sensors located on the right hand side of the display can be combined with a LED and are used to choose one of the following four selected options:

- ↔ Delay start
- ↔ Extra rinse
- ↔ Easy iron
- ↔ Pre-wash



Depending on the option / choices, the programme duration time is updated (via the three digits).

- **Sensor no. 8-9**

These two sensors are positioned under the display and act as:

- ↔ Time manager

Allowing the end user to lengthen or shorten the washing cycle duration, this adjustment should be done after setting the temperature value and the spin speed.



- **Sensor no. 10**

This sensor has the START/PAUSE function, used to start up a washing programme, after selecting the washing cycle and required options; it can also pause a cycle that has already started: to allow you to change selected option or open the door (if the temperature conditions or water level allow for this).

The cycle re-starts if you touch the sensor again.

The Led combined with this sensor flashes slowly: in the selection phase, during the pause and at the end of a cycle with water in the tub. It stays lit when a cycle is running and turns off when the cycle has ended and the door is unlocked.



While other sensors when touched immediately change from selected to de-selected, in the case of this sensor, more time is needed to avoid unwanted cycle start-ups or pauses.

Display

The display is produced by a black film with transparent, silk-screen printed symbols, that are lit by yellow LEDs when activated.

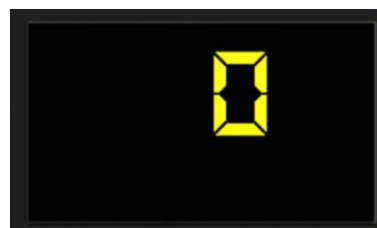


The information described below appears on the display.

↩ - **Duration of the washing programme**, which appears after it has been selected. This time corresponds to the time required for the maximum wash load for each type of programme. If an option is selected/deselected, the time is automatically updated. After the programme has started, the time decreases (and is updated) minute by minute.

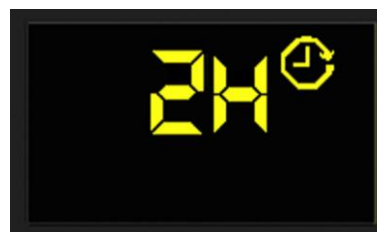


↩ - **End of the programme** is indicated by a **permanently lit zero** (when the door can be opened).




↩ - **Appliance stopped with water in the tub**, after the programmes with the RINSE HOLD option. This is displayed by a **permanently lit zero**. The symbol indicating the door remains on and the LED of the START/PAUSE sensor is turned off. The washing machine continues to operate, rotating the drum once every 2 minutes.

↩ - **Delayed start:** selected using the relative sensor, every time the delayed time is pressed, it increases and is simultaneously shown on the display.
 ↩ Up to 90 minutes the increases are of 30 minutes (↩ 30 mins ↩ 60 mins ↩ 90 mins)
 ↩ From 2 - 20 hours the increases are of 1 hour(2hrs. ↩ 3hrs... ↩ 20h ↩ 0h). In order to reset the delay time, reach the maximum delay time (20 hours) and the next time the sensor is pressed the delay time is cancelled.



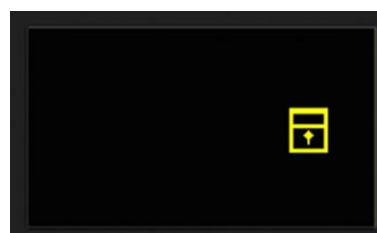
Once the delay time has been set, after 3" of no sensor being touched, the display will once again show the programme's duration time. Press the sensor once to view the set delay time. After starting the cycle the display shows the delay time count down.

The icon  and LED near the silk-screen printed symbol stay on, for the entire selection and delay phase, to show that the function is active.

During the last hour, the time decreases minute by minute

To cancel the delayed start time, after the cycle has started, pause the washing machine using the related sensor and cancel the option.

↩ - **Padlock:** when lit, it indicates that all the sensors are disabled to prevent children from altering, starting or pausing the cycle; To disable this function, a sensor combination needs to be pressed, which can be printed on the control panel or described in the instruction manual.



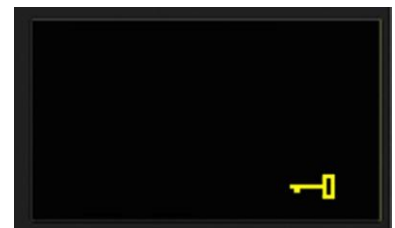
- ↶ - **Incorrect choice:**
displayed by the message “Err”, when a function that is not compatible with the chosen programme is selected.
It is displayed for two seconds.



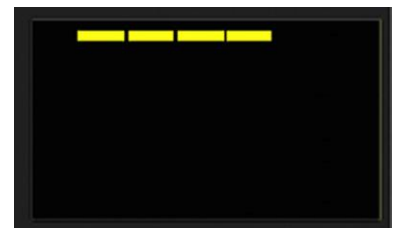
- ↶ - **Alarm code:**
Alarm code indicates an error in the appliance operation; the START/PAUSE sensor flashes when the code is displayed.



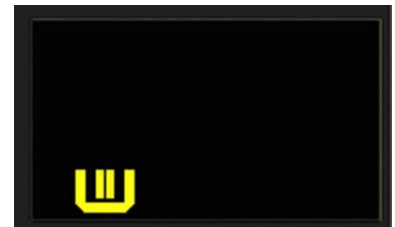
- ↶ - **Door closed**
It lights up when the safety device prevents the door opening and switches off when it can be opened.
It flashes when the device is about to unlock the door (with door interlock with PTC, which needs one or two minutes to open).



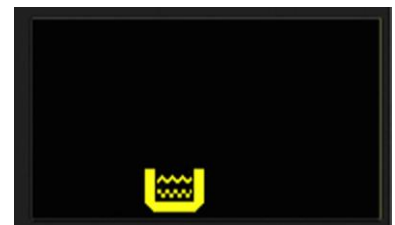
- ↶ - **Time manager:**
represented by four segments positioned above the digits.
(See para. 3.3 page 15)



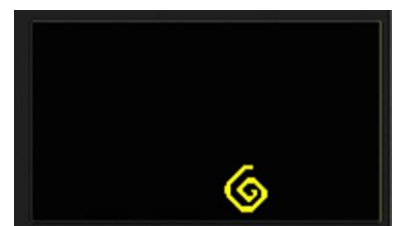
- ↶ - **Wash phase:**
It lights up during the washing phase



- ↶ - **Rinse phase:**
It lights up during the rinse phase



- ↶ - **Spin phase:**
It lights up during the drainage phase before and during the final spin.



3.2.3.5 Buzzer

This comprises a multi-tone buzzer and sounds in the following cases:

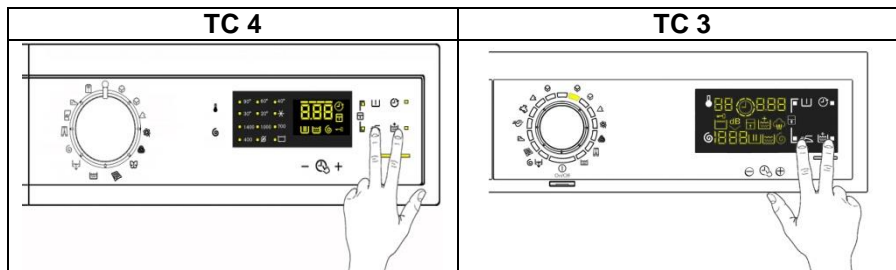
- When the machine is turned on and off it emits two different tunes.
- When a sensor is pressed it emits a short “**Click**”
- When the cycle ends this is indicated by a special sequence of “**three long beeps**” repeated at intervals of 15” for a total of 2 minutes. The sequence can only be stopped by opening the door in appliances where the instant door safety device with micro-switch is fitted.
- In the event of a malfunction in the machine this is indicated by a special sequence of “**three short beeps**” repeated 3 times at intervals of 15” for a total of 5 minutes.

All appliances are fitted with the buzzer, and leave the factory with the option enabled. To disable it use the combination of sensors.

The volume level is set in the factory and cannot be adjusted by the user.

When the buzzer is disabled (using the combination of sensors) it only emits the short “**Click**” and the sequence of “**three short beeps**” when an alarm is triggered.

During the programme selection phase, the buzzer can be enabled/disabled with a sensor combination (which may be silk-screen printed on the control panel or described in the instruction manual), but the alarm signalling remains enabled.



To enable it, touch the sensors simultaneously for 5 seconds. A short beep will confirm that it has been enabled, whereas two short beeps will confirm that it has been disabled.

3.3 Time manager

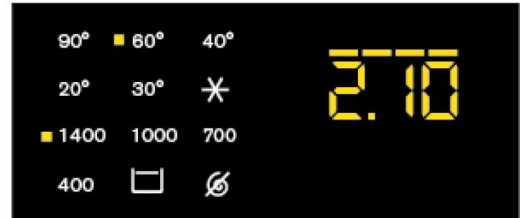
The time manager is an option available in programmes for Cotton, Synthetics, Delicates and Jeans.

During the selection of the washing cycle, four segments above the digits light up which show that the programme manages the “Time Manager” option.

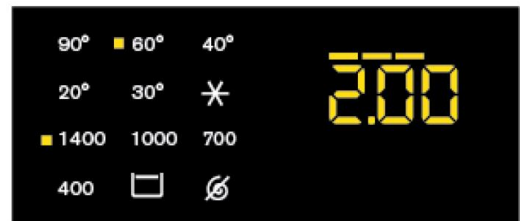
The final user can reduce the three level washing cycle duration, simultaneously with each selection: the display updates the washing cycle time and turns off a segment.

When a programme with “Time manager” is selected the four segments light up that correspond to the maximum duration time of the selected programme.

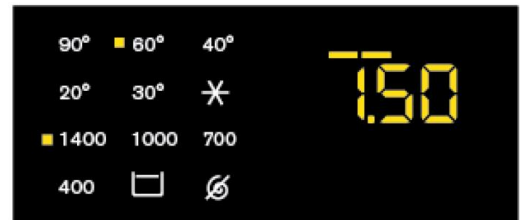
Touching the sensor with the “+” sign there is no variation. The four segments stay lit and the time shown by the digits does not vary.



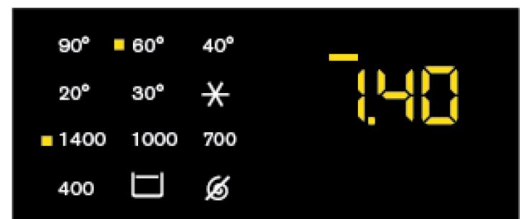
Touching the sensor with the “-” sign once, one segment turns off and simultaneously the washing time shown by the digits decreases.



Touching the sensor with the “-” sign twice, two segments turn off and simultaneously the washing time shown by the digits decreases further.



Touching the sensor with the “-” sign three times, three segments turn off and simultaneously the washing time shown by the digits decreases further. Only one segment that initiates the minimum level of the “Time manager” is still lit.



Continuing to touch the sensor with the “-” sign no other segment turns off and the time does not decrease any further.

Once the minimum level has been reached to obtain a variation, you need to touch the sensor with the “+” sign. An increase in time shown by the digits will be obtained with the respective increase in the number of segments lit, until they are all lit and the maximum time shown will be that of the programme.

There is no “Time manager” in the “Cotton Eco” programme, however the segments are lit. By pressing the “Time manager” sensor once to reduce the time two segments are deselected.

4 TC3 STYLING

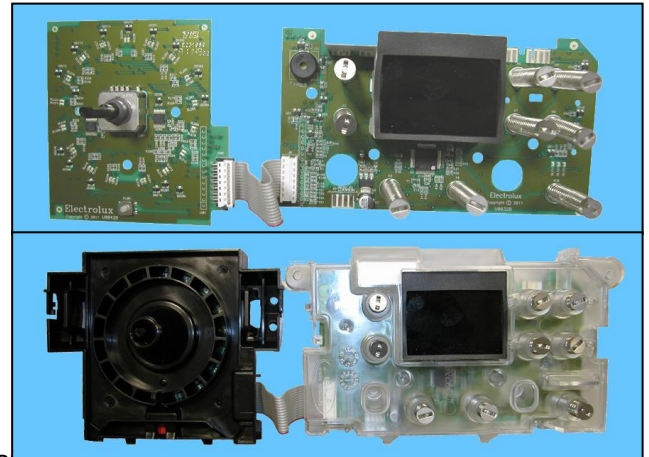
4.1 General characteristics

The TC3 styling has a single ON/OFF button, all the other choices/adjustments are made by skimming your finger over the touch sensors, which replace the buttons used so far.

In the event of problems with the touch sensors (difficulty selecting/adjusting them), clean and dry the display and do not wear gloves when setting the chosen programme.

The EWX11831 and EWX14931 electronic control system consists of two circuit boards plus the motor control (Inverter) for washing machines, whereas a further board is used in washer dryers for the part dedicated to drying.

- ↗ The control/display board, which is inserted in a plastic container fixed to the control panel (the figure shows: the display board with the side socket in which the selector is fixed, connected together by a flat cable, and the display board assembly).



- ↗ The main circuit board is positioned at the rear of the appliance and receives commands from the display board, powers the electrical components as well as communicating with the motor control board (Inverter).

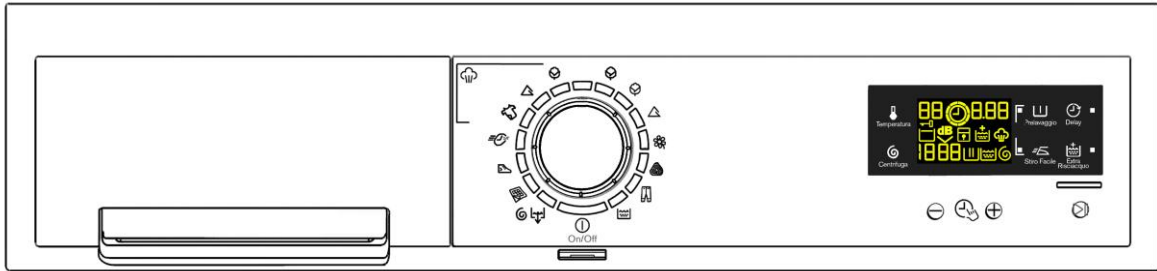
No. of buttons	▪ max 1 (ON/OFF)
No. of sensors	▪ maximum 9 (8 options + 1 start/pause)
No. LEDs	▪ maximum 22 + LCD
Programme selector	▪ 14 positions (incorporated in the circuit board)
Serial port	▪ DAAS-EAP communication protocol up to 115,200 baud
Power supply voltage	▪ 220/240V ▪ 50/60 Hz (configurable)
Washing type	▪ Traditional with "Eco-ball"
Rinsing system	▪ Traditional with "Eco-ball"
Motor	▪ Two-pole asynchronous (three-phase).
Spin speed	▪ 400 1,600 rpm
Anti-unbalancing system	▪ AGS
Cold water fill	▪ 1 solenoid valve with 1 inlet – 2 or 3 outlets
Hot water filling	▪ 1 solenoid valve with 1 inlet – 1 outlet
Detergent dispenser	▪ 3 compartments: prewash/stains, wash, fabric softeners ▪ 4 compartments: prewash, wash, stain remover and conditioners.
Control of water level in the tub	▪ Electronic/analogue pressure switch
Door safety interlock	▪ Instantaneous
Heating element heat output	▪ 1950W with thermal fuses incorporated
Temperature control	▪ NTC probe incorporated in the heating element
Buzzer	▪ Traditional incorporated in the PCB

4.2 Control panel

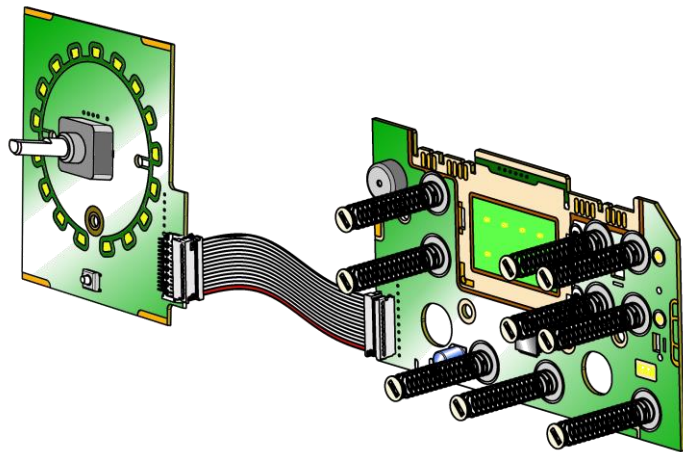
4.2.1 Styling

- Max. 1 Button
- Max. 9 sensors
- 14 position programme selector
- 22 LEDs
- 1 LCD

Version WM

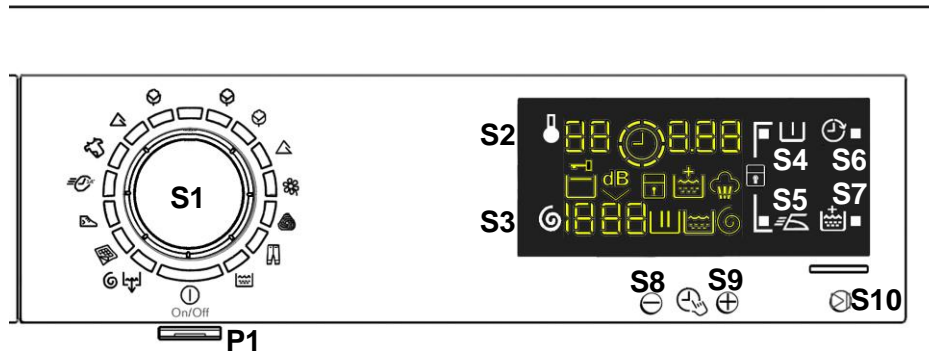


- Positioning of LEDs and sensors



4.2.2 Control panel configuration

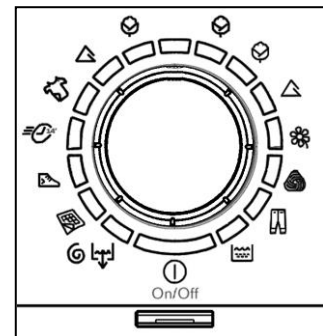
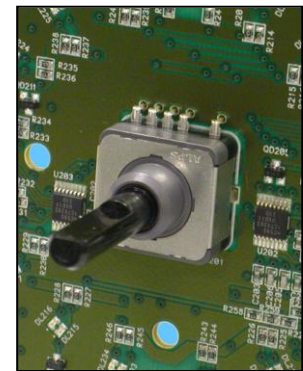
The description below applies to both versions (washing machines and washer dryers), unless specified with Washing machines or Washer Dryers.



The washing programmes, the functions of the selector knob (where featured) and the various sensors vary according to the model, since these are determined by the configuration of the appliance.

4.2.2.1 Programme selector (S1)

The selector used is of the HI-FI type (the dial has no index and no reset position, the programme selected is indicated by the fact that the corresponding LED lights up). The number of positions cannot be configured. There are always 14 (in all stylings) and they are bound to the number of LEDs that indicate the washing programmes. The programmes can be configured to perform different washing cycles (e.g.: water level, drum movement, no. of rinses and the washing temperature to be selected according to the type of garments). The selector can be turned both clockwise and anti-clockwise. For each programme, the compatible options and other parameters are defined.



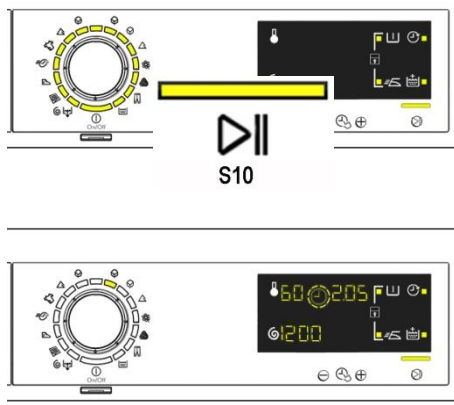
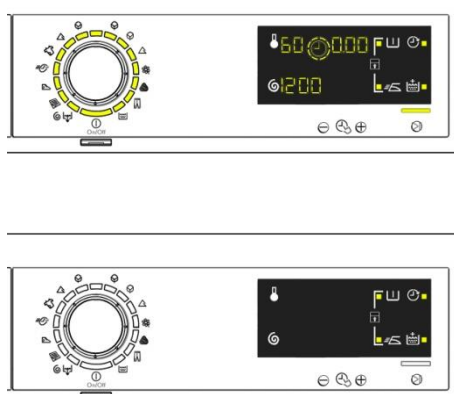

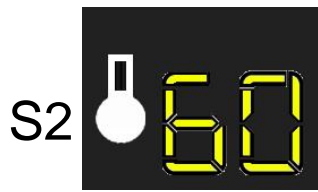
4.2.2.2 Programme configuration





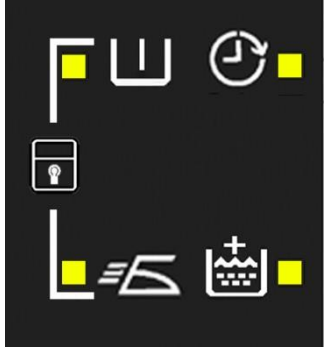



The table below lists the parameters that can be used to define the washing programmes.

Types of fabric	Cotton/linen, Synthetic fabrics, Delicates, Wool, Hand-wash, Shoes, Jeans, Duvet, Silk.
Special programmes	Soak, Miniprogramme, Easy-Iron, Conditioner, Rinses, Delicate rinses, Drain, Delicate spin, Spin.
Temperature	Normal, Maximum: the initial temperature is the one set for the washing programme selected.
Spin	Normal, Minimum, Maximum
Options (Normal/Possible)	Rinse Hold, Night Cycle, Pre-wash, Stains, Extra Rinse, Easy-Iron, Time Manager 1/2/3/4/5/6/7/8, Reduced Spin Speed, Steam.
Programme phases	Pre-wash, Wash, Rinses, Spin, Delayed start.





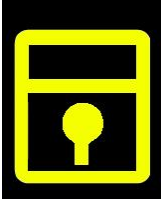
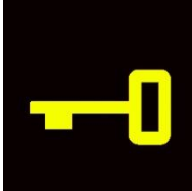




4.2.2.4 Sensors – LEDs and LCD

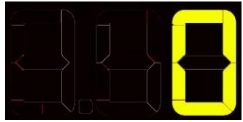




The function of each button is defined by the configuration of the appliance.

<ul style="list-style-type: none"> Button no. 1: ON/OFF - ON This button is always included in all three stylings. Press it to turn the appliance on, at the same time the buzzer will sound a tone (if enabled), all the LEDs around the selector dial will light up for an instant and the LCD display stays off (figure above). When the initial phase has ended, only one LED remains lit and the LCD display shows the basic settings of a programme (figure below). <p>The operation of the ON/OFF depends on the configuration of the main circuit board. It can cut the appliance off from the electricity mains completely (0 Watt circuit) or set the appliance to low energy consumption mode (without 0 Watt circuit) in which case you will need to take the plug out of the socket to cut off the electricity supply completely.</p> <p>Press the ON/OFF button to cancel the chosen programme.</p>	
<ul style="list-style-type: none"> Button no. 1: ON/OFF - OFF To turn the appliance off, press this button and hold it down for approximately 1 second, after this time the buzzer will sound a tone (if enabled), all the LEDs around the selector dial will light up for an instant (figure above), the LCD display shows the programme settings, then the following switch off: the LEDs around the selector dial, the Start/Pause LED, the LCD display (figure below). 	
<ul style="list-style-type: none"> Sensor no. 2: TEMPERATRE This is related to the part of the LCD display in which the washing cycle temperature is shown. The starting temperature shown on the LCD display is the one set for the programme selected. Touch the sensor (represented by the thermometer symbol) in sequence to lower the temperature. Once the lowest temperature has been reached, the selection starts off again from the highest one available for that particular programme. <p>The temperatures available (displayed in °C) are: 90°C, 60°C, 50°C, 40°C, 30°C, 20°C, cold cycle.</p> <p>the cold cycle is displayed by two dashes. </p>	

<ul style="list-style-type: none"> Sensor no. 3: SPIN SPEED This is related to the part of the LCD display in which the washing cycle spin speed is shown. The starting speed shown on the LCD display is the one set for the programme selected. Touch the sensor (represented by the spin cycle symbol) in sequence to lower the speed; once the lowest speed has been reached, the next selections are: <ul style="list-style-type: none"> ➤ “Rinse Hold” and the related symbol lights up  (where compatible with the chosen programme) ➤ “Night cycle” and the related symbol lights up  <p>The next selection will be the highest speed available for the programme.</p> <p>The spin speeds are: 1600–1400–1200–1000–800–600–400– 0 “No Spin”, “Rinse Hold” and “Night Cycle” When no speed is selected, or one of the following cycles is selected: “No Spin”, “Rinse Hold” and “Night Cycle”, the LCD display shows three dashes </p>	
<ul style="list-style-type: none"> Sensor nos. 4-5-6-7: OPTION (configurable) Each of the sensors located on the right hand side of the LCD display can be combined with a LED and are used to choose one of the following options: <ul style="list-style-type: none"> ↔ Delay start ↔ Super rinse ↔ Easy iron ↔ Pre-wash ↔ Hot and cold water (only TC3 WM where featured) <p>Depending on the option / choices, the programme duration time is updated (via the three digits).</p>	
<ul style="list-style-type: none"> Sensor nos. 8-9 These two sensors are positioned under the display and act as: <ul style="list-style-type: none"> ↔ Time manager Allowing the end user to lengthen or shorten the washing cycle duration, This adjustment should be done after setting the temperature value and the spin speed. 	 
<ul style="list-style-type: none"> Sensor no. 10 This sensor has the START/PAUSE function, used to start up a washing programme, after selecting the washing cycle and required options; it can also pause a cycle that has already started: to allow you to change selected option or open the door (if the temperature conditions or water level allow for this). The cycle re-starts if you touch the sensor again. The LED combined with this sensor flashes slowly: in the selection phase, during the pause and at the end of a cycle with water in the tub. It stays lit when a cycle is running and turns off when the cycle has ended and the door is unlocked. While other sensors when touched immediately change from selected to de-selected, in the case of this sensor, more time is needed to avoid unwanted cycle start ups or pauses. 	

The information described below also appears on the LCD:

<p>Washing Machine</p> <p>The three icons shown have the following meanings, respectively:</p> <ul style="list-style-type: none"> - Wash  - Rinse  - Spin  <p>They are lit during the setting phase to display which phases are included in the programme.</p> <p>During the programme the icon for the phase in progress flashes, and when the phase has ended it remains lit continuously. The same applies when the machine is in pause during the cycle.</p>	
<ul style="list-style-type: none"> • Padlock: The icon lights up when the “child lock” is on. To indicate that all the sensors are disabled to prevent children from modifying, starting or pausing the cycle. Touch any sensor or turn the selector dial during its activation and the icon will flash. <p>A sensor combination needs to be pressed to activate/deactivate it. It may be silk-screen printed on the control panel or described in the instruction manual.</p>	
<ul style="list-style-type: none"> • Door closed sensor: Lights up when the safety device stops door opening and switches off when the door can be opened. Flashes when the device is about to unlock the door (with door interlock with PTC, which needs one/two minutes to open). 	
<ul style="list-style-type: none"> • Washing programme time This appears after a washing programme has been selected. This time corresponds to the time required for the maximum wash load for each type of programme. After the programme has started, the time decreases (and is updated) minute by minute. 	
<ul style="list-style-type: none"> • Delay start Selected on the related sensor. After the START/PAUSE sensor has been touched, the countdown starts and the delay time decreases hour by hour, from a delay of 2 hours up to 20 hours (⌚ 30' ⌚ 60' ⌚ 90' ⌚ 2h ⌚ 3h... ⌚ 20h ⌚ 0h). During the last 2 hours, it decreases by 30 mins at a time. During the delayed start, the LED beside the silk-screen printed symbol on the front panel  remains permanently lit. 	
<ul style="list-style-type: none"> • Selection incorrect Displays the flashing message “Err”, for one second. Appears on selecting option that is incompatible with the programme selected, or when the selector is turned while a cycle is running. 	

<ul style="list-style-type: none"> • End of cycle End of the programme is indicated by a permanently lit zero (when the door can be opened). • Appliance stopping with water in the tub, at the end of Programmes with the RINSE HOLD option, this is displayed by a permanently lit zero. The LED indicating the door remains on and the LED of the START/PAUSE sensor is turned off. The washing machine continues to operate, rotating the drum once every 2 minutes. 	
<ul style="list-style-type: none"> • Alarm code Indicates an anomaly during operation of the machine. Simultaneously to the displaying of the code on the LCD display, the LED above the START/PAUSE sensor flashes. 	
<ul style="list-style-type: none"> • Calculate amount of washing Only for appliances with PROPORTIONAL programmes After starting the washing programme the dot starts to flash. At this point the washing machine calculates the amount of washing inside the drum. When this phase ends the dot lights up fixed and the three digits display the programme time. 	
<ul style="list-style-type: none"> • Extra rinse Appliances which do not feature the button and related LED for the extra rinse option can enable/disable this option by pressing a sensor combination (which may be silk-screen printed on the control panel or described in the instruction manual). This option is enabled/disabled during programme selection and is confirmed by the related symbol being turned on/off. The option remains enabled even after the appliance has been turned off (for subsequent programmes). 	
<ul style="list-style-type: none"> • Steam It lights up in programmes which envisage the production of steam inside the drum. 	

4.2.2.5 Buzzer

See para. 3.2.3.5 pag. 14

5 DEMO MODE

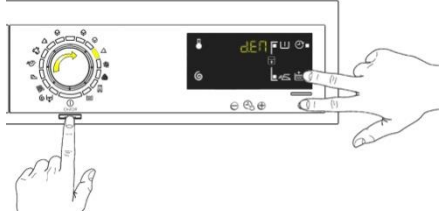

A special cycle is designed to demonstrate the operation of these appliances in shops, without connecting them to the water mains. This way, any one of the programmes can be selected and, once the start button/sensor has been pressed/touched (START/PAUSE), the appliance will only perform some of the phases of the programme, skipping those which cannot be performed (water fill, drain, heating).

The cycle takes place as follows:

- ☞ the door lock is enabled regularly (door locked during operation, possibility of opening it at the end of the cycle or when paused)
- ☞ Motor: all low speed movements are enabled, the pulses and spin are disabled,
- ☞ the water fill solenoid valves and the drain pump are disabled.
- ☞ display: since the cycle phases are very rapid (one second of the demo cycle corresponds to approximately one minute of the actual cycle), the time left decreases by one unit every second. Bear in mind that the end time does not always correspond to the actual cycle time.

5.1 Access to DEMO settings

The operations listed below must be carried out within 7 seconds.

TC 3	TC 4
	
<p><u>Do not start the procedure with your fingers over the combination sensors</u></p>	
<ol style="list-style-type: none"> 1. Switch on the appliance using the ON/OFF button 2. Turn the selector clockwise until the third LED lights up. 3. Simultaneously press the START/PAUSE button and the nearest option sensor (as shown in the diagram). 4. Hold your fingers over the sensors (approximately three or five seconds) until "dEM" flashes for a short time. 	<ol style="list-style-type: none"> 1. Set the selector dial to position 0 (zero). 2. Turn the three position switch clockwise 3. Simultaneously press the START/PAUSE button and the nearest option sensor (as shown in the diagram). 4. Hold your fingers over the sensors (approximately three or five seconds) until "dEM" flashes for a short time.

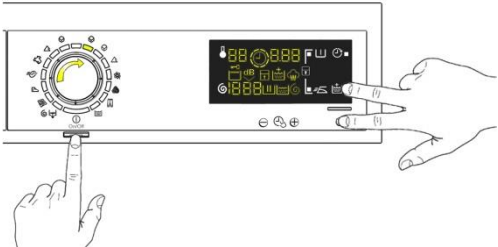

5.2 Exiting DEMO mode

Disconnect the power supply to exit demo mode.

6 DIAGNOSTIC SYSTEM

6.1 Accessing diagnostics

The operations listed below must be carried out within 7 seconds.

TC 3	TC 4
	
<p><u>Do not start the procedure with your fingers over the combination sensors</u></p>	
<ol style="list-style-type: none"> 1. Switch on the appliance using the ON/OFF button. The first LED lights up. 2. Simultaneously press the START/PAUSE button and the nearest option sensor (as shown in the diagram). 3. Hold your fingers over the sensors until the LEDs and symbols begin to flash in sequence (approximately 3 seconds). <p>In the first position, the operation of the sensors, of the related LEDs and of the groups of symbols shown on the LCD screen is checked; turn the programme selector dial clockwise to run the diagnostic cycle for the operation of the various components and to read any alarms.</p>	<ol style="list-style-type: none"> 1. Set the selector dial to position 0 (zero). 2. Rotate the programme selector by one position clockwise. 3. Simultaneously press the START/PAUSE button and the nearest option sensor (as shown in the diagram). 4. Hold your fingers over the sensors until the LEDs and display symbols begin to flash in sequence (approximately 3 seconds). <p>In the first position, the operation of the sensors, of the related LEDs and of the groups of symbols shown on the LCD screen is checked; turn the programme selector dial clockwise to run the diagnostic cycle for the operation of the various components and to read any alarm.</p>

6.2 Quitting the diagnostics system

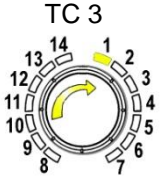

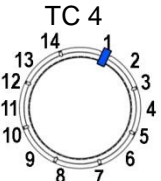


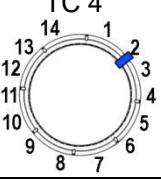


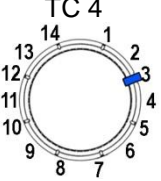
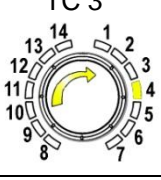

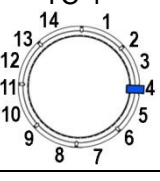
- To exit the diagnostic cycle, switch the appliance off then back on: for TC3 styling press the ON/OFF push button, while for TC4 styling rotate the knob to 0 (zero). If "ELE" (electricity trials) appears on the screen when you turn the appliance on, repeat the operation of turning it on and off.






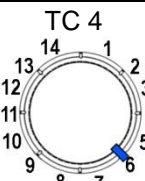


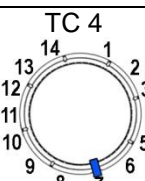


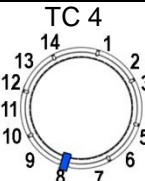


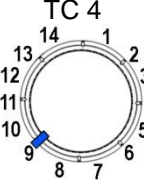
6.3 Diagnostic test phases


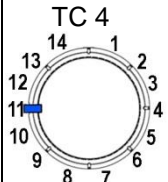

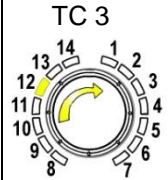
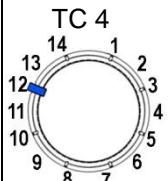
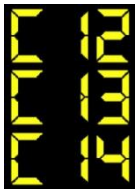
Irrespective of the type of circuit board and the configuration of the selector, after entering the diagnostic mode, turn the programme selector dial **clockwise** to perform the diagnostic cycle for the operation of the various components and to read any alarms.

Concurrently a selector control code is shown on the LDC display for **two** seconds, before displaying what is described in the last column of the table below.

(All alarms are enabled in the diagnostic cycle).

Selector position	Components activated	Working conditions	Function tested	LCD display
1	 <p>TC 3</p>	Always active	User interface functioning	
	 <p>TC 4</p>			
2	 <p>TC 3</p>	Door closed Water level below anti-flooding level Maximum time 5 mins.	Water fill to wash compartment	 Water level in the tub (mm)
	 <p>TC 4</p>			
3	 <p>TC 3</p>	Door closed Water level below anti-flooding level Maximum time 5 mins.	Water fill to pre-wash compartment	 Water level in the tub (mm)
	 <p>TC 4</p>			
4	 <p>TC 3</p>	Door closed Water level below anti-flooding level Maximum time 5 mins.	Water fill to conditioner compartment	 Water level in the tub (mm)
	 <p>TC 4</p>			

Selector position	Components activated	Working conditions	Function tested	LCD display	
5	 <p>TC 3</p>	<ul style="list-style-type: none"> Door safety interlock Third Solenoid valve 	<ul style="list-style-type: none"> Door closed Water level below anti-flooding level Maximum time 5 mins. 	<ul style="list-style-type: none"> Water fill to Third solenoid valve compartment 	
	 <p>TC 4</p>				<ul style="list-style-type: none"> Water level in the tub is displayed (mm)
6	 <p>TC 3</p>	<ul style="list-style-type: none"> Door safety interlock Fourth solenoid (hot water, if present) 	<ul style="list-style-type: none"> Door closed Water level below anti-flooding level Maximum time 5 mins. 	<ul style="list-style-type: none"> Water fill to Fourth solenoid valve compartment 	
	 <p>TC 4</p>				<ul style="list-style-type: none"> Water level in the tub is displayed (mm)
7	 <p>TC 3</p>	<ul style="list-style-type: none"> Door safety interlock Wash solenoid valve, if the water in the tub is not enough to cover the heating element Heating element 	<ul style="list-style-type: none"> Door closed Water level above the heating element. Maximum time 10 mins or up to 90°C. (*) 	<ul style="list-style-type: none"> Heating 	
	 <p>TC 4</p>				<ul style="list-style-type: none"> Temperature in °C measured using the NTC probe.
8	 <p>TC 3</p>	<ul style="list-style-type: none"> Door safety interlock Wash solenoid valve, if the water in the tub is not enough to cover the heating element Motor (55 rpm clockwise, 55 rpm anti-clockwise, 250 rpm pulse) 	<ul style="list-style-type: none"> Door closed Water level above the heating element 	<ul style="list-style-type: none"> Check for leaks from the tub. 	
	 <p>TC 4</p>				<ul style="list-style-type: none"> Drum speed in rpm/10
9	 <p>TC 3</p>	<ul style="list-style-type: none"> Door safety interlock Drain pump Motor up to 650 rpm then at maximum spin speed (**) 	<ul style="list-style-type: none"> Door closed Water level lower than anti-boiling level for spinning. 	<ul style="list-style-type: none"> Drain, calibration of analogue pressure switch and spin. 	
	 <p>TC 4</p>				<ul style="list-style-type: none"> Drum speed in rpm/10

Selector position	Components activated	Working conditions	Function tested	LCD display
10	-----	-----	-----	-----
11	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>TC 3</p>  </div> <div> <p>TC 4</p>  </div> </div> <p>Reading/Deleting the last alarm</p>	-----	----	
12 ÷ 14	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>TC 3</p>  </div> <div> <p>TC 4</p>  </div> </div> <p>The LEDs light up in sequence, the symbols on the LCD display light up in groups and the backlighting comes on, Touch a sensor to turn on the group of icons in the LCD screen or the corresponding LED and the buzzer sounds at the same time.</p>	Always active	User interface functioning	

(*) In most cases, this time is sufficient to check the heating. However, the time can be increased by repeating the phase without draining the water: pass for a moment to a different phase of the diagnostic cycle and then back to the heating control phase (if the temperature is higher than 80°C, heating does not take place).

(**) The check at the maximum speed occurs without control of the A.G.S. and no garments must be inside the appliance.

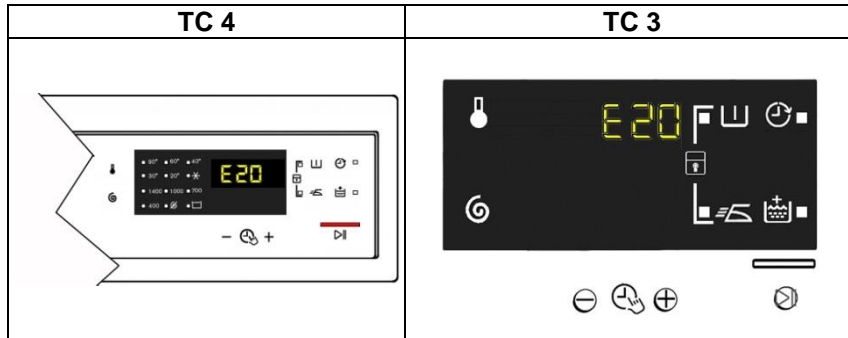
7 ALARMS

7.1 Displaying the alarms to the user

When a problem arises with the appliance, "WARNING" appears on the LCD screen, represented by a code (three digits, indicating the time required for the cycle to end). At the same time the buzzer gives off three short "beeps" every 20" for a period of 5 minutes.

Once the fault has been repaired the buzzer does not give off any "beeps" and the selected programme appears on the LCD screen.

This does not occur for alarm EH0.



The alarms displayed to the user are listed below and can also be eliminated by the user:

TC4 / TC3	
P1	E10 - Water fill difficulty (tap closed)
	E20 - Drain difficulty (filter dirty)
	E40 - Door open
	EF0 – Excessive detergent
	EH0 – Voltage or frequency outside the normal values

While the alarm listed below:

TC4 / TC3
EF0 – Water leakage (Aqua Control System)

For its solution, the intervention of a Service engineer is required

The other alarms are displayed by a code.

The alarms are enabled during the execution of the washing programme. With the exception of alarms associated with the configuration and the power supply voltage/frequency, which are also displayed during the programme selection phase.

The door can normally be opened (except where specified) when an alarm condition has occurred, on condition that:

- The water in the tub is below a certain level.
- The water temperature is lower than 55°C.
- The motor has stopped.

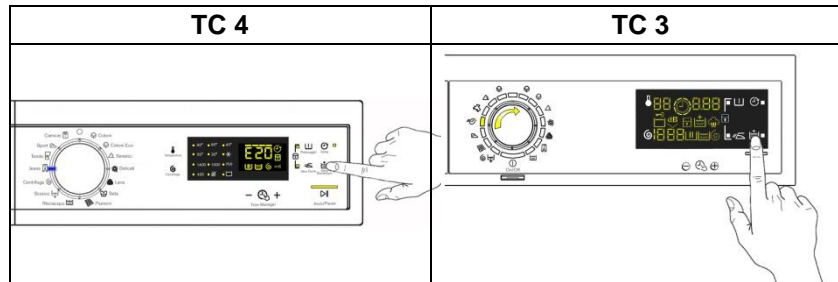
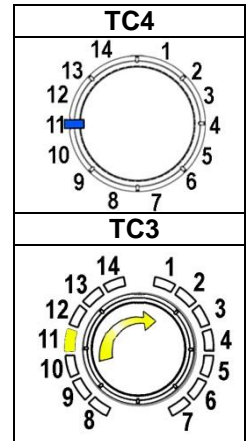
Certain alarm conditions require a drain phase to be performed before the door can be opened for safety reasons:

- Cooling water fill if the temperature is higher than 65°C
- Drain until the analogue pressure switch is on "empty", within a max. time of 3 minutes.

7.2 Reading the alarms

The last three alarms stored in the FLASH memory of the PCB can be displayed:

- Enter diagnostic mode (par. 6.1)
- Irrespective of the type of PCB and configuration, turn the programme selector knob **clockwise** to the **eleventh position** and the last alarm is displayed.
- to display previous alarms, touch the sensor closest to the START/PAUSE sensor in sequence (as shown in the figure)
- To return to the last alarm, touch the START/PAUSE sensor.



7.3 Rapid reading of alarms

It is possible to display the last alarm even if the selector is not in the eleventh diagnostics position or the machine is in normal operation (e.g. while a washing programme is in progress):

- Touch the **START/PAUSE** sensor and the nearest **option sensor** simultaneously (as if you were entering DIAGNOSTIC mode) and hold for at least 2 seconds: the LCD display shows the last alarm.
- The alarm will continue to be displayed until a sensor is touched.
- While the alarm is being displayed, the appliance continues to perform the cycle or, if in the programme selection phase, it stores the previously selected options.

7.4 Deleting the last alarm

It is good practice to cancel the alarms stored:

- after reading the alarm codes, to check whether the alarm re-occurs during the diagnostic cycle
- after repairing the appliance, to check whether it re-occurs during testing

N.B. With this operation all the alarms stored are deleted.

TC 4	TC 3
<ol style="list-style-type: none"> 1. enter the diagnostic mode (para. 6.1) 2. Turn the selector clockwise until the eleventh LED lights up. 3. Simultaneously press the START/PAUSE sensor and the nearest option sensor (as shown in the diagram). 4. Keep your fingers over the sensors until the LCD display shows "E00" (at least 5 seconds). 	

8 OPERATING TIME COUNTER

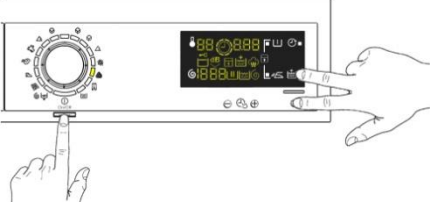

Using a specific procedure, the operator can display the total operating time for the appliance, which is counted from the moment it is first switched on.

The unit can count up to a maximum of **6,550** hours of operating time.

- only the operating time of normal programmes (and not diagnostic cycles) is counted
- the actual operating time for the cycle is counted (which does not include pauses, delayed start time, rinse hold time and soaking phases)
- the precision of the counter is 30 seconds per programme.
- only whole hours of operation are counted (1 hr and 59 min = 1 hr)

8.1 Reading the operating time




The operations listed below must be carried out within 7 seconds.

TC 3	TC 4
	
<p><u>Do not start the procedure with your fingers over the combination sensors</u></p>	
<ol style="list-style-type: none"> 1. Switch on the appliance using the ON/OFF button 2. Turn the selector clockwise until the fifth LED lights up. 3. Simultaneously press the START/PAUSE button and the nearest option sensor (as shown in the diagram). 4. Keep your fingers over the sensors until the hours of operation appear on the display (at least 5 seconds). 	<ol style="list-style-type: none"> 1. Set the selector dial to position 0 (zero). 2. Rotate the programmes knob clockwise as far as position five 3. Simultaneously press the START/PAUSE button and the nearest option sensor (as shown in the diagram). 4. Keep your fingers over the sensors until the hours of operation appear on the display (at least 5 seconds).

8.2 Display of total operating time

This time is displayed with a sequence of two digits at a time: the first two digits indicate thousands and hundreds, the second two digits indicate tens and units.

For example, if the operating time is **6,550** hours, the display will show the following sequence:

	Phase 1	Phase 2	Phase 3
	<p>For <u>two seconds</u> It displays: Hr</p>	<p>For <u>two seconds</u>, the following digits are displayed: ↙ thousands (6) ↘ hundreds (5)</p>	<p>For the next <u>two seconds</u> the following digits are displayed: ↙ tens (5) ↘ units (0).</p>
<p>TC 4/3</p>			

At the end of phase three (after the tens and units are displayed), the cycle is repeated.

To return to normal mode, either: switch the appliance off or press a button or turn the selector knob.

9 OPTIONS


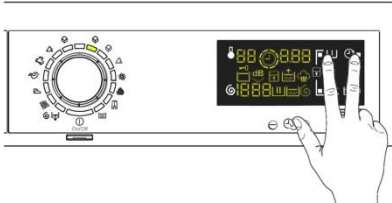
9.1 Compatibility between options

		OPTIONS																	
		Rinse hold	Night cycle	Pre-wash	Extra rise	Easy-iron	Economy	TM 8	TM 7	TM 6	TM 5	TM 4	TM 3	TM 2	TM 1	Max steam	Medium steam	Minimum steam	
Compatibility with OPTIONS	Rinse hold	■		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Night cycle		■	X	X		X	X	X	X	X	X	X	X	X	X	X	X	
	Pre-wash	X	X	■	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Super rinse	X	X	X	■	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Easy-iron	X		X	X	■	X	X	X	X	X	X	X	X	X	X	X	X	
	Economy	X	X	X	X	X	■						X				X	X	
	TM 8	X	X	X	X	X		■									X	X	
	TM 7	X	X	X	X	X			■								X	X	
	TM 6	X	X	X	X	X				■							X	X	
	TM 5	X	X	X	X	X					■						X	X	
	TM 4	X	X	X	X	X	X					■					X	X	
	TM 3	X	X	X	X	X							■				X	X	
	TM 2	X	X	X	X	X								■			X	X	
	TM 1	X	X	X	X	X									■		X	X	
	Max steam	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	■		
	Medium steam	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		■	
	Minimum steam	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			■
Phases where selection / modification is possible	Selection	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Pre-wash	X	X		X	X										X	X	X	
	Wash	X	X		X	X										X	X	X	
	Rinses	X																	
Spin																			

- The delayed start is compatible with all programmes except for Drain; the maximum time selectable is 20 hours.
- The selection of the spin cycle is available for all programmes, except for Drain/Extra Silent.

9.2 Description of options

- **Rinse hold**
 - During the cycle the intermediate rinses and spins are performed.
 - Stops the appliance with water in the tub before the final spin cycle.
 - To drain the water, simply press the START/PAUSE button to run the drain and spin cycles.
- **Pre-wash**
 - Adds a pre-wash phase at the start of the cycle with water heating to 30°C (or cold, if selected).
 - In COTTON and SYNTHETIC FABRICS cycles, performs a short spin before passing on to the washing phase.
 - This option cannot be selected for WOOL and HAND WASH cycles.
- **Super rinse**
 - Adds **two** rinses to the COTTON cycles, adds **one** rinse to the SYNTHETIC FABRICS - DELICATES cycles.
 - Eliminates the spin at the end of washing.

ENABLING/DISABLING EXTRA RINSE USING A COMBINATION OF SENSORS	
Appliances which do not envisage the SUPER RINSE option combined with a button can enable it through a sensor combination.	
TC 4	TC 3
	
During the selecting phase, touch the two sensors shown in the figure simultaneously for a few seconds until the related icon lights up. This option also remains enabled during subsequent cycles. To disable it, repeat the same operation until the related icon is turned off.	

- **No spin**
 - It eliminates all the spin phases.
 - It adds three rinses to the COTTON CYCLE and one to the SYNTHETIC FABRICS cycle.
- **TM 5-6-7-8**
 - Modifies the structure of the COTTONS - SYNTHETICS - DELICATES cycles to obtain good washing performance in a short space of time.
- **TM 2-3-4**
 - Modifies the structure of the wash phase of the COTTON - SYNTHETIC FABRICS - DELICATES cycles by half a load.
- **TM 1**
 - Modifies the structure of the wash phase of the COTTONS - SYNTHETICS - DELICATES cycles by 1kg of laundry.
- **Delayed start time**
 - Adds a pause before the start of the programme. The delay time is shown on the three digit display (see page 12 Delayed start).
 - To start the cycle immediately after the countdown to the delayed start has already begun: press the Start/Pause button, cancel the delay time by pressing the relevant button, then press Start/Pause again.

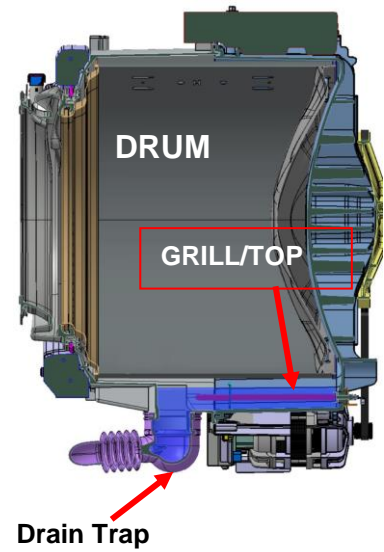
9.2.1 Generating STEAM

Certain programmes can be configured to generate steam, refresh the laundry or remove some creases or make ironing easier.

To obtain steam, during these programmes, the quantity of water filled in the tub must be enough to cover the heating element and the maximum temperature to reach is 60°C / 75°C.

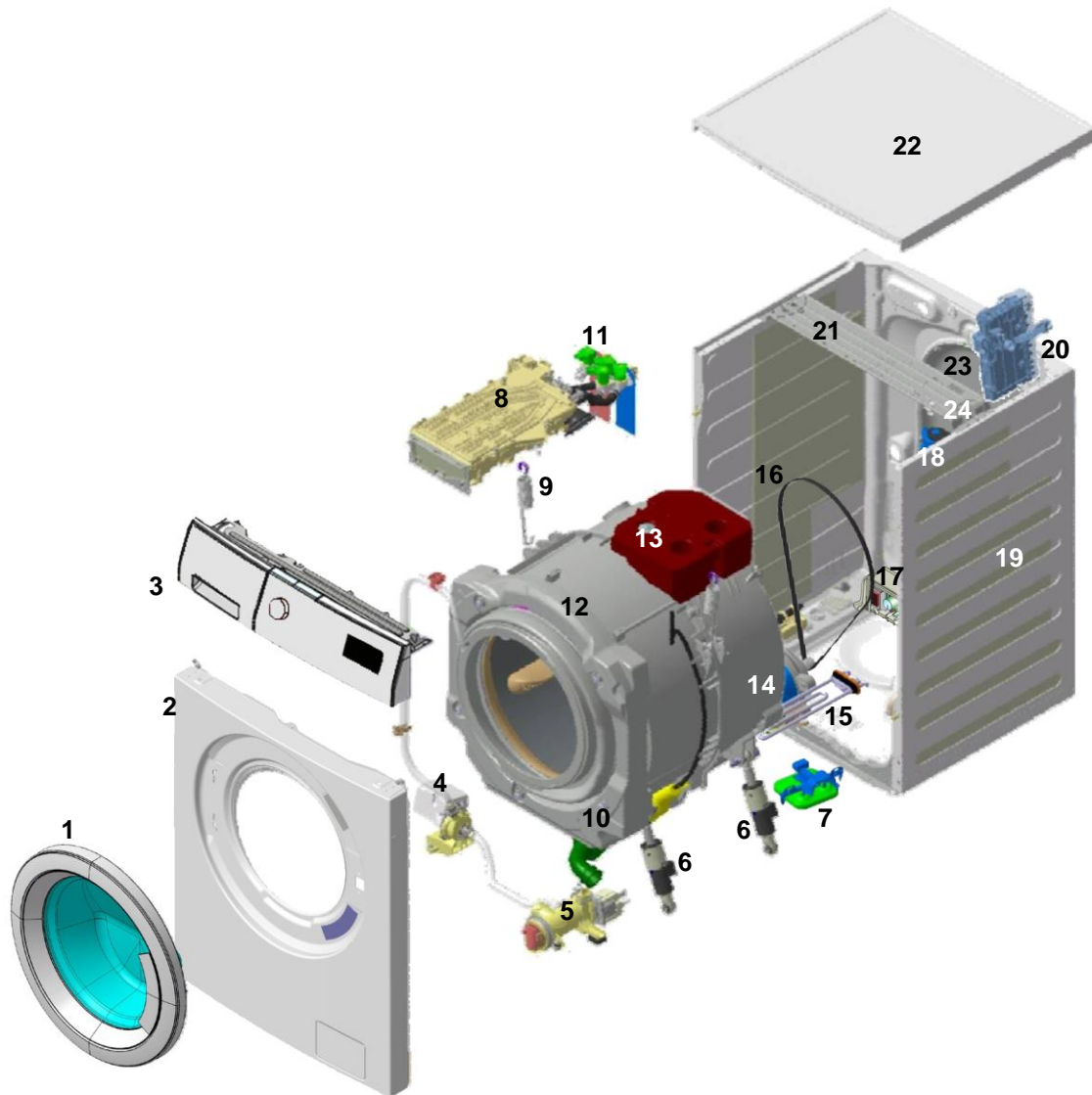
During the water filling and the movement of the drum, the laundry must not get wet.

It is essential that the appliance is perfectly level during installation in order to obtain this.



10 TECHNICAL CHARACTERISTICS

10.1 Construction



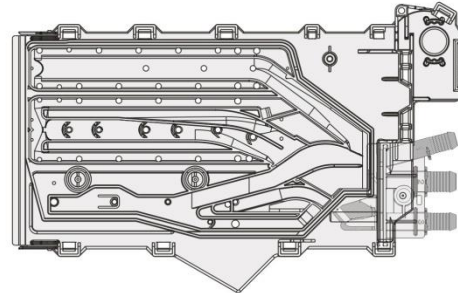
- | | |
|------------------------------------|----------------------------------|
| 1. Door | 12. Washing unit |
| 2. Front panel | 13. Upper counterweight |
| 3. TC4/3 control panel | 14. Motor |
| 4. Circulation pump | 15. Resistance |
| 5. Drain pump | 16. Belt |
| 6. Shock absorbers | 17. Inverter motor control board |
| 7. Aqua Control | 18. Analogue pressure switch |
| 8. Detergent dispenser | 19. Back unit casing |
| 9. Washing unit suspension springs | 20. Main circuit board |
| 10. Front counterweight | 21. Crossbar |
| 11. Solenoid valves | 22. Worktop |
| | 23. Back panel |

10.2 Detergent dispenser

10.2.1 Detergent dispenser with multi-way solenoid valves

The water in the detergent dispenser is filled through a solenoid valve for cold water (with one inlet, and 2 or 3 outlets) and where featured one for the hot water (with one inlet and one outlet); The detergent dispenser has 4 compartments.

- Tray conveyor
- 3-way water inlet nozzle

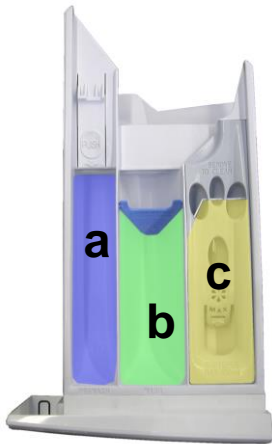


10.2.2 Operating principle of 4-compartment conveyor

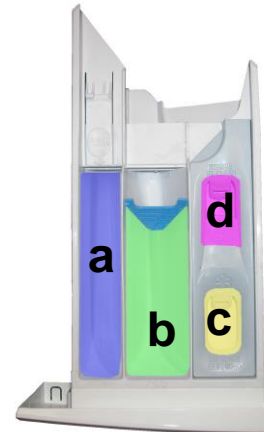
<p style="text-align: center;">Water fill to pre-wash compartment (pre-wash solenoid)</p> <ul style="list-style-type: none"> • This solution is used with the four compartment tray: the detergent in compartment “a” is loaded at the start of the pre-wash phase. 	
<p style="text-align: center;">Water fill to wash compartment (wash solenoid)</p> <ul style="list-style-type: none"> • In all models: compartment “b” is used to contain the detergent loaded at the start of the washing. 	
<p style="text-align: center;">Water fill to conditioner compartment (pre-wash and wash solenoid valves)</p> <ul style="list-style-type: none"> • In all models: compartment “c” is used for the conditioner, which is loaded at the start of the final rinse. The prewash and wash solenoid valves are activated simultaneously. 	
<p style="text-align: center;">Water fill to bleach compartment (where featured) (bleach solenoid valves)</p> <ul style="list-style-type: none"> • In all models: compartment “d” is used for the bleach, which is loaded at the start of the final rinse in the cotton cycles. 	
<p style="text-align: center;">Hot water filling (hot water solenoid)</p> <ul style="list-style-type: none"> • In models designed to operate with hot water, the hot water solenoid valve is activated to fill water into the washing compartment “b” concurrently with the cold water. 	

10.3 Detergent dispenser

Three compartments



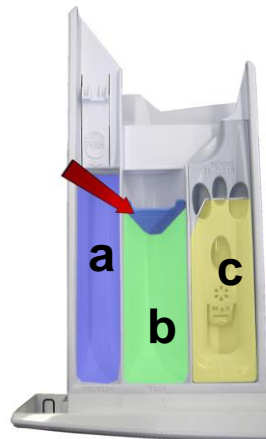
Four compartments



10.3.1 Arranging the flap in the detergent dispenser

The detergent dispenser is designed for use with: powder detergent or liquid detergent.

A flap (indicated by the arrow) has been fitted inside compartment "b" where the detergent is introduced, which can be flipped up or down.



With the flap flipped up, the appliance is ready for use with powder detergent (this is the factory setting) - see figure opposite.



To modify the position of the flap, pull the detergent dispenser out and turn it

With the flap flipped down, the appliance is ready for use with liquid detergent.



For further details, read the instruction manual.

10.4 Washing unit

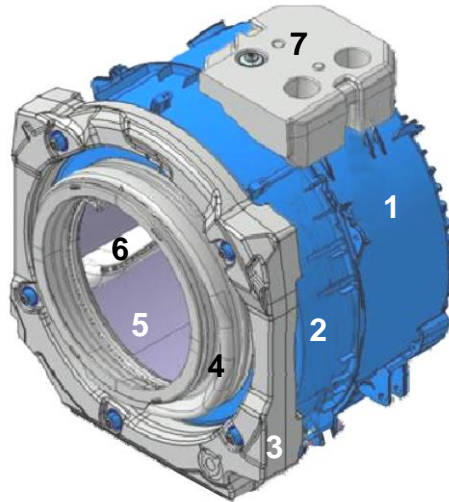
WASHING UNIT		
Type	Load capacity (cottons) Wash max.	Drum volume
G60	See instruction manual	66 litres

The washing unit is made up of:

A back casing (1) and a front casing (2), welded together to form the welded tub. Inside this is the drum (5) (made of stainless steel) with the three blades (6) in carboran snap-fastened to the drum.

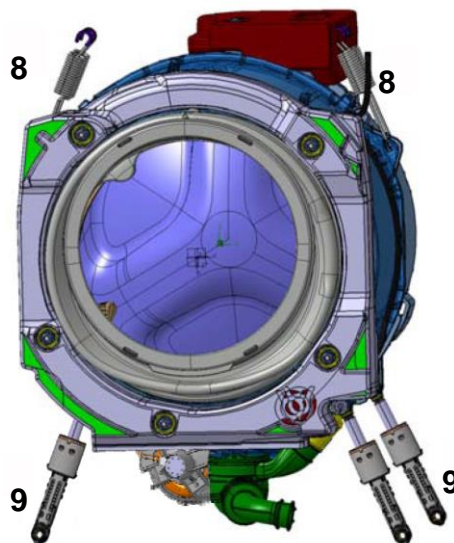
To balance the unit during the washing movements and during the spin phases, the counterweights are secured in place with screws: a front counterweight (3) and a rear one (7).

The bellow seal (4) is fixed at the front.

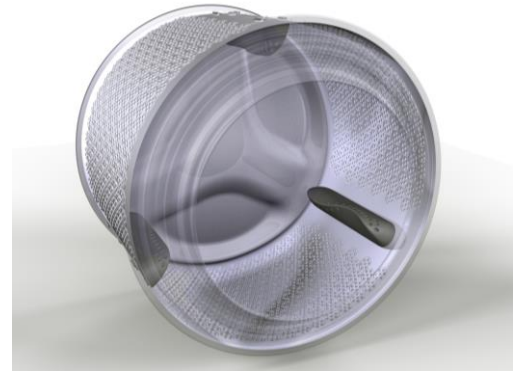


The washing unit is suspended by two coil springs (8) attached to the top crossbar, and the oscillations are damped by three shock absorbers, two on the right (9) and one on the left (9) (looking straight at the front of the appliance).

The TC3/4 stylings have all three shock absorbers the same.



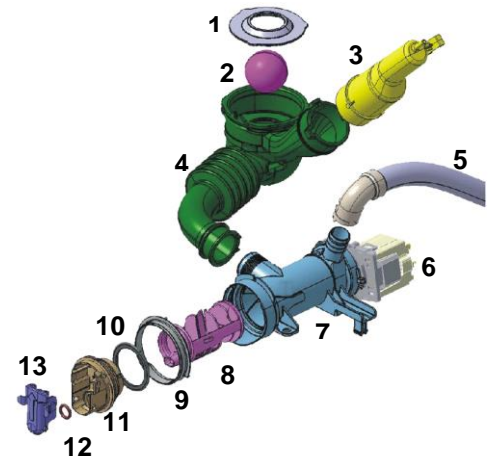
Drum with three blades inside.



10.5 Water circuit

10.5.1 OKO version drain circuit

1. Ball lock ring
2. Ball
3. Pressure chamber
4. Filter body tub tube
5. Drain pipe
6. Drain pump
7. Filter body
8. Filter or needle trap
9. Filter body seal
10. Filter dial seal
11. Filter dial
12. Locking lever seal
13. Locking lever



10.5.2 New Filter dial

Until now, the loading circuit was drained as described below:

- ↪ For some machines it is necessary to disconnect the drain pipe from the back panel, positioning it as low down as possible to drain any remaining water from the inside of the drain circuit.
- ↪ In other machines, there is a small hatch at the bottom of the front panel, from which it is possible to access the filter dial. Close to this is a small pipe that can be used to drain the water, after the plug has been removed from it.
- ↪ For machines manufactured with the new filter dial: open the hatch at the bottom of the front panel, and the filter dial will appear as shown in fig. 1.

To drain the water, simply:

- press the two tabs that lock the plug closing lever, fig. 2.
- simultaneously extract the top part of the lever as shown by the yellow arrow in fig. 3.
- position the closing lever as shown in fig. 4.

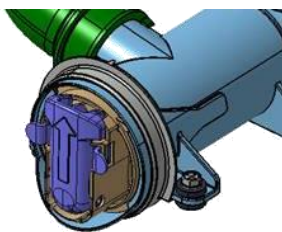


Fig. 1

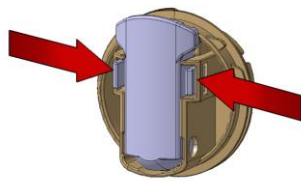


Fig. 2

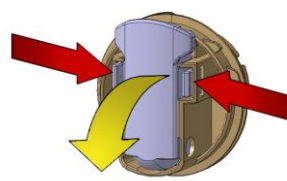


Fig. 3

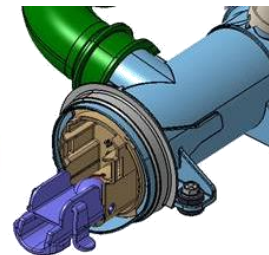


Fig. 4

10.6 Electronic control

10.6.1 Programming/Updating the main circuit board



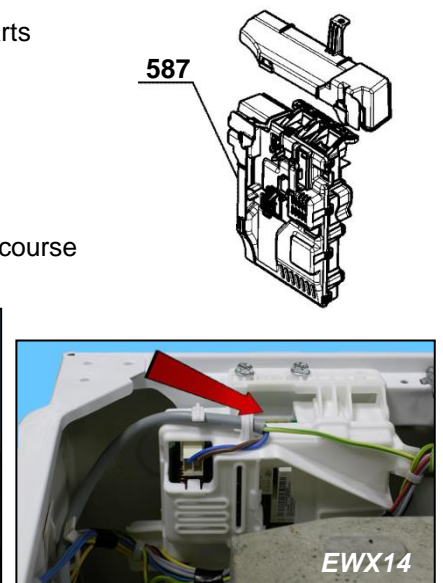
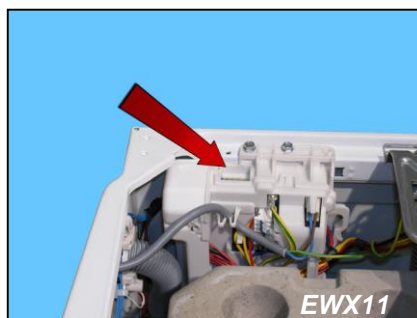
- **Any programming/updating/diagnostics operation carried out with the board installed on the appliance and the mains plug disconnected from the socket.**
- **If one of these operations is accidentally carried out when plugged in to the socket, on completing the operation, the appliance will remain turned off when restarting; disconnect the plug from the socket and wait at least 40 minutes before starting up the appliance (any operation will only create further delay).**

In the Service Notes the main circuit board (587) is identified with two spare parts codes:

- ↪ Code 973 914... identifies the pre-programmed board.
- ↪ Code 132... identifies the unprogrammed board.

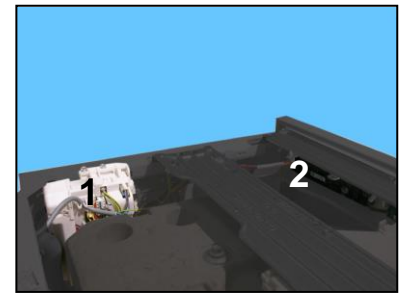
The circuit board can be programmed/updated using the **Sidekick** application. For further information, please refer to the instructions provided/illustrated in the course entitled << **Sidekick Guide** >> at the link (<http://electrolux.edvantage.net>) on the Electrolux Learning Gateway portal.

To update/program the main board, insert the **Sidekick** connector in the position shown by the red arrow:



– WM Electronic control
 The electronic control is made up of:

1. Main circuit board
2. Control/display circuit board
3. INVERTER motor control board (not shown in the figure, positioned at the bottom in the centre of the appliance seen from the rear).



The control/display circuit board contains: the selector used to select the washing programme, the LCD display to show programme information, buttons used to adjust the temperature, the spin speed and optionally to select an option, the Start/PAUSE button and finally the ON/OFF button.

The commands received by the display board (by turning the selector dial, selecting an option, etc...) are sent to the main circuit board, which powers all the electrical components (cold and hot water solenoid valve - where featured, motor control board - Inverter, drain pump, circulation pump - where featured, heating element, door safety interlock, drum light).

It controls the level of water via the analogue pressure switch.

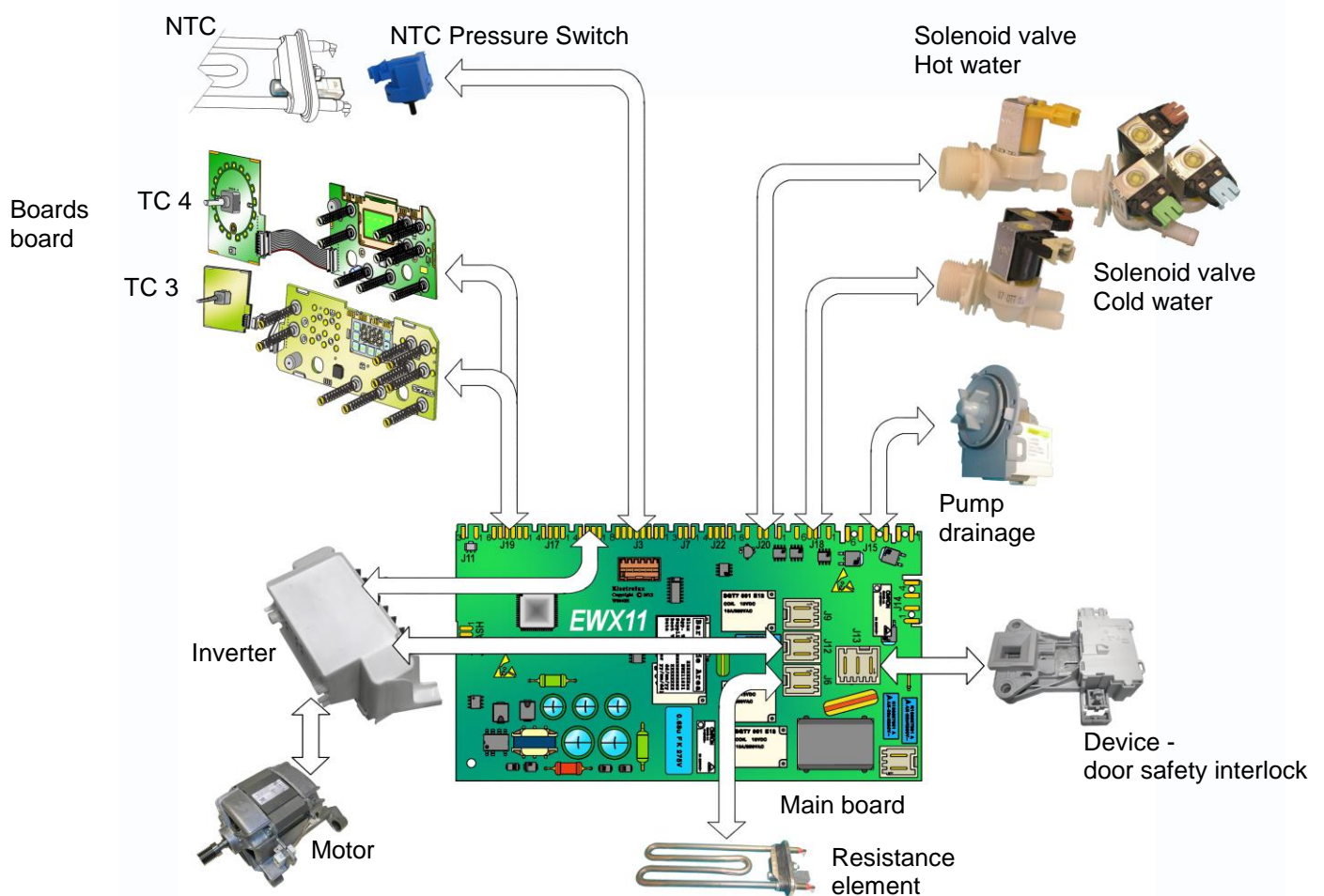
It controls the state of the door.

It controls the speed of the motor.

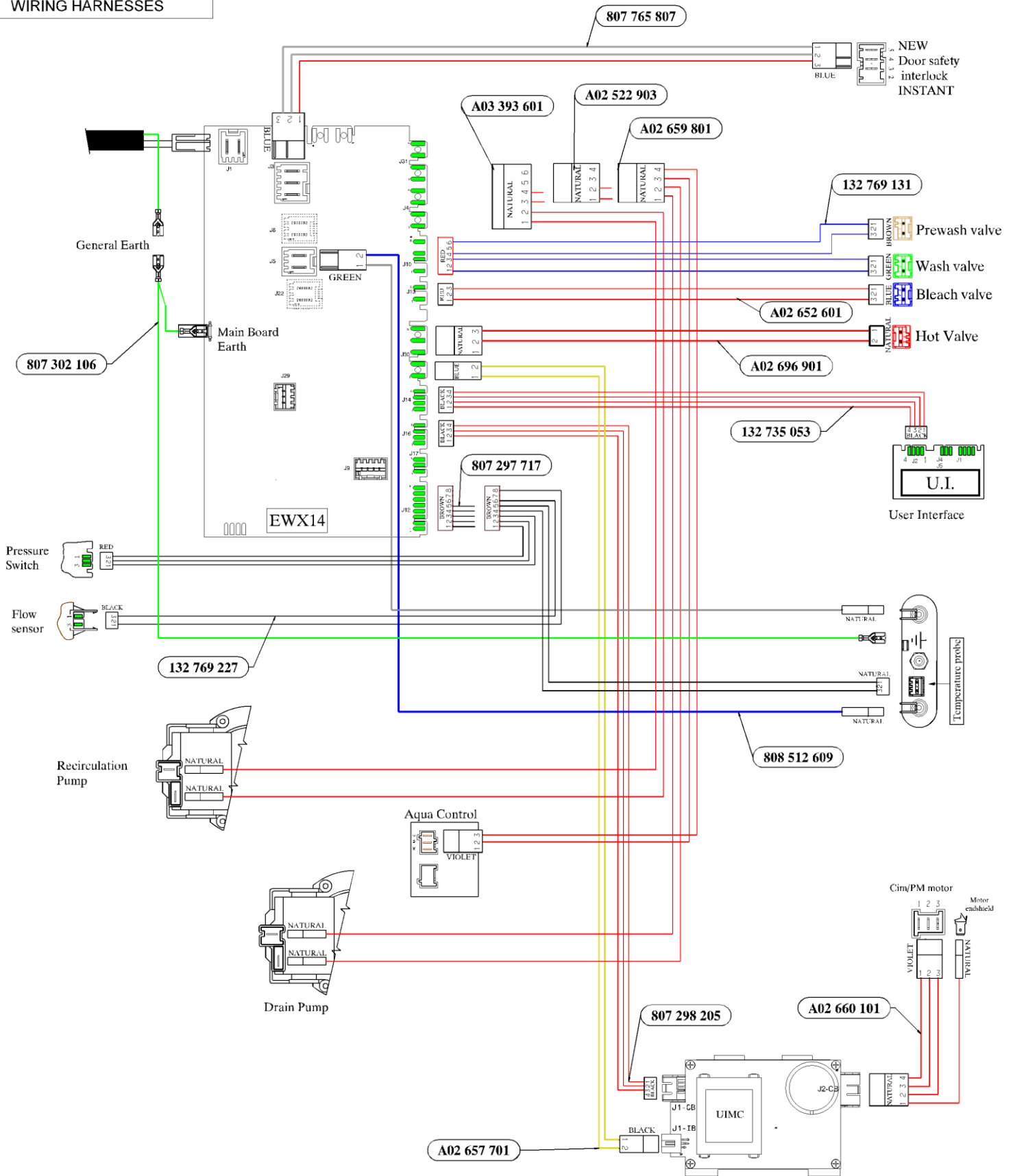
It controls the temperature of the wash water via the NTC probe inserted in the heating element.

It controls the voltage and frequency of the power supply and ensures they are close to the rated ones.

It simultaneously controls their functioning to guarantee the correct performance of the washing cycle.



WIRING HARNESSES



11 ELECTRICAL COMPONENTS



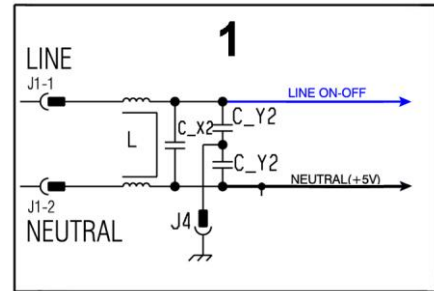
- **When replacing any of the components, please refer to the code shown in the list of spare parts relating to the appliance being repaired.**

11.1 Anti-disturbance filter

11.1.1 General characteristics

This device is connected to the electricity power line input of the appliance and avoids the emission of radio frequency disturbances in the power network. It is incorporated into the main board.

1. Main circuit board



11.2 Display board



- **Warning the sensors located in the display boards could be at a potential of 220 Volts.**

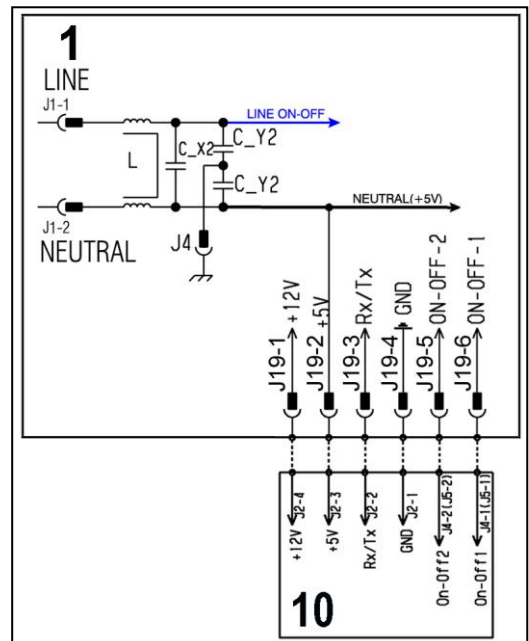
The main circuit board (1) supplies the power supply voltage to the control/display board (12).

Turn the selector dial to select the programmes, touch the sensors to choose the options and touch the START/PAUSE sensor to start or pause the appliance.

The buzzer - where featured - is powered by the display board.

1. Main circuit board

10. Display board

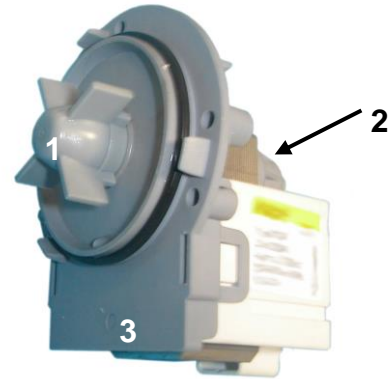


11.3 Drain pump

	<ul style="list-style-type: none"> When replacing the pump, please refer to the code shown in the list of spare parts relating to the appliance.
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11.3.1 General characteristics

1. Wheel
2. Rotor
3. Stator



The pump, which drains the water at the end of the various washing cycle phases, is centrifugal and is activated by a synchronous motor.

The rotor consists of a permanent magnet and the direction of rotation can be either clockwise or anticlockwise. It can turn by approximately a quarter of a revolution without turning the wheel. Consequently, if a foreign body is stuck in the wheel, the rotor can perform small movements clockwise and anticlockwise until the foreign body is released.

The flow rate of these pumps is approximately 18÷20 l/min, and the maximum head is 90 cm. above ground level. Fitted with overload cut-out.

Important

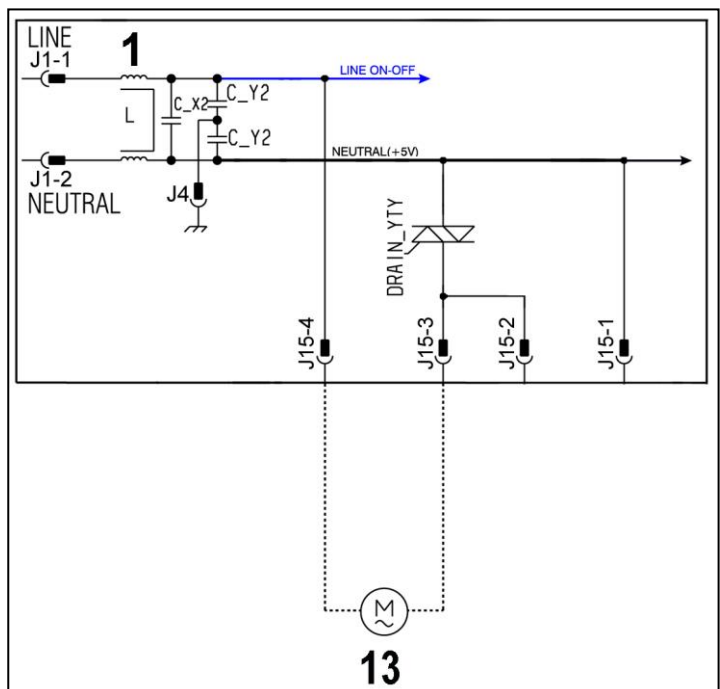
Synchronous pumps, when powered on empty (disconnected from the water circuit), may not start in some cases because their very construction makes them need an antagonist torque on the wheel to allow the rotor to move in one of the two directions.

The pumps should therefore only be tested once fitted to the appliance, after a little water has been filled.


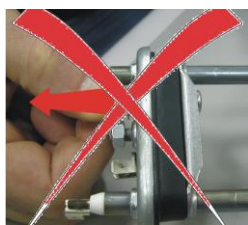
The drain pump is powered by the main circuit board through a triac, as follows:

- ↪ for a pre-determined period (and an alarm might be displayed - see table of alarms).
- ↪ Until the electronic pressure switch closes on empty, after which the pump is activated for a brief period or moves on to the next phase.

1. Main circuit board
13. Drain pump



11.4 Heating element

	<ul style="list-style-type: none"> • When replacing the heating element, please refer to the code shown in the list of spare parts relating to the appliance. • It is strictly forbidden to tamper with the heating element in any way!!! (e.g. replace the NTC probe, etc...) 	
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11.4.1 General characteristics

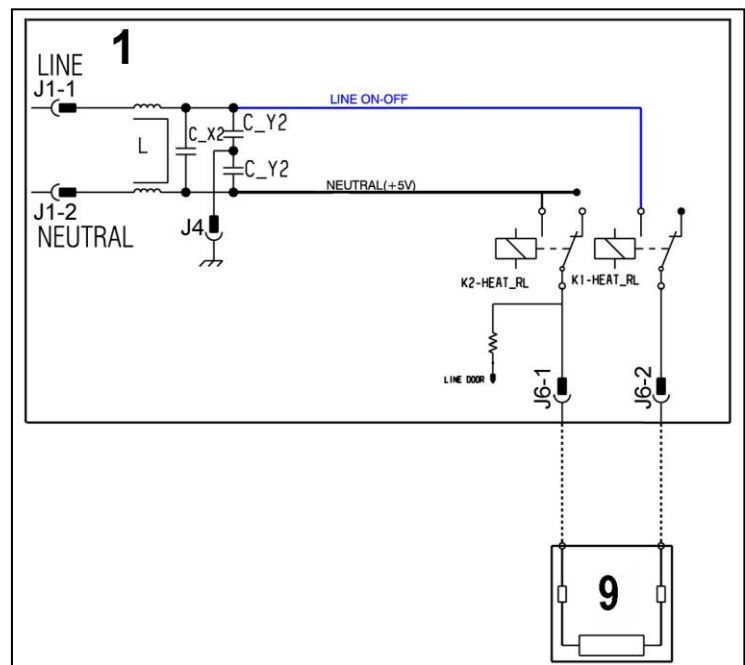
1. NTC probe
2. Heating element




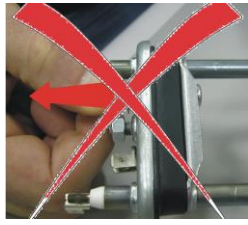
The heating element of the washing water is armoured, i.e. it is inserted in sealed tubular stainless steel casing.

It is powered by two relays (K1, K2) situated in the circuit board. It is fitted with two thermal fuses which trip if the temperature of the heating element exceeds the values for which they were calibrated. (In the event of a fault an alarm will be displayed - see table of alarms).

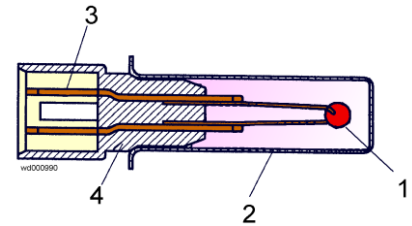
1. Main circuit board
9. Heating element



11.5 Temperature sensor

	<ul style="list-style-type: none"> • When replacing the heating element, please refer to the code shown in the list of spare parts relating to the appliance. • It is strictly forbidden to tamper with the heating element in any way!!! (e.g. replace the NTC probe, etc...) 	
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11.5.1 General characteristics

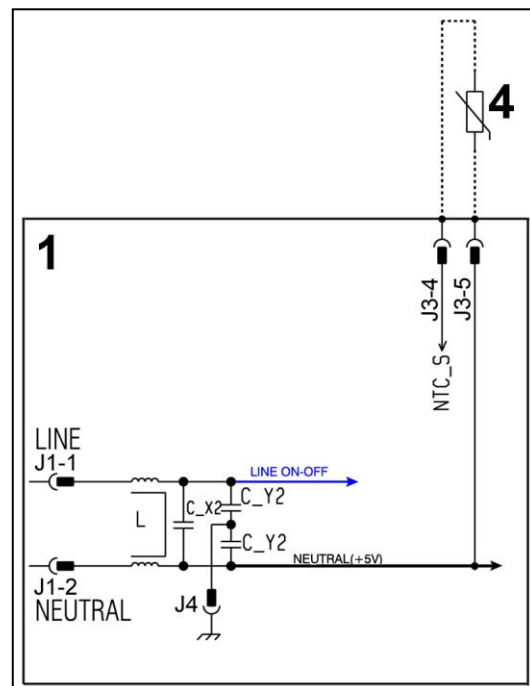


1. NTC heating element
2. Metal capsule
3. Terminals
4. Plastic casing

An NTC type probe is used to control the washing temperature: it is built in such a way that its internal resistance decreases as the temperature rises. This drop in resistance is detected by the electronic control which, when the desired temperature is reached, disconnects the heating element.

The temperature of the water is controlled by the circuit board by means of an NTC temperature probe incorporated in the heating element.

1. Main circuit board
4. NTC probe

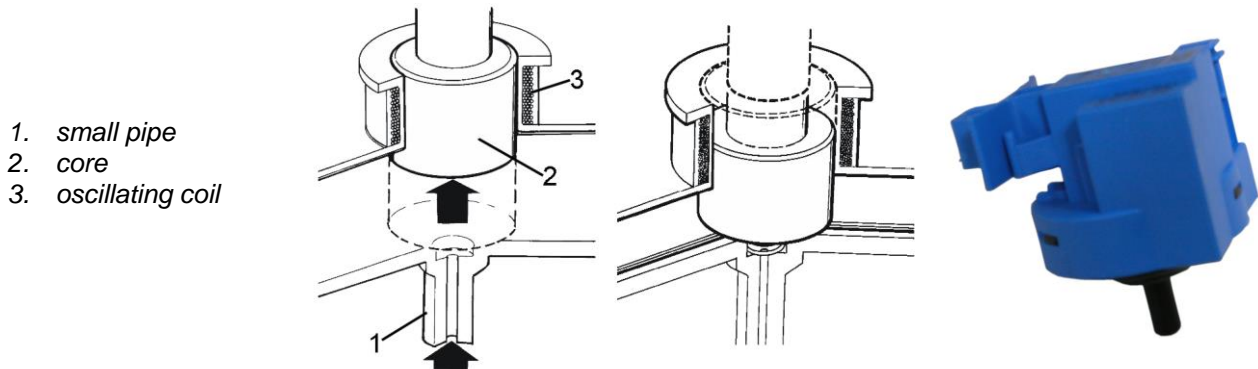


In the event of a fault (short-circuit or stoppage) an alarm will be displayed - see table of alarms.

11.6 Analogue pressure switch

11.6.1 General characteristics

The electronic pressure switch is an analogue device that controls the water level in the tub, used in models with electronic control system, and it is directly connected to the main PCB.

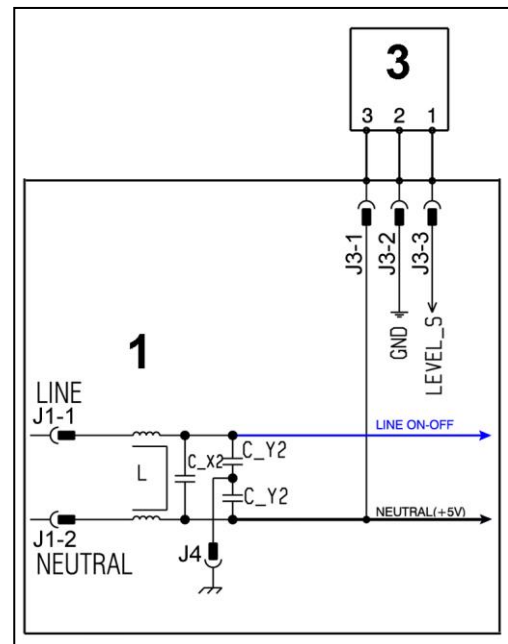


The pressure switch is connected via a pipe to the pressure chamber.

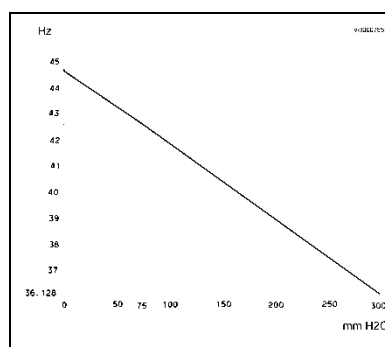
When water is introduced into the tub, this creates a pressure inside the hydraulic circuit that causes the membrane to change position. This in turn modifies the position of the core inside the coil, thus changing the inductance and the frequency of the oscillating circuit.

The PCB recognises how much water has been introduced into the tub according to the frequency.

1. *Main circuit board*
3. *Analogue pressure switch*



Operating frequency variation according to the quantity of water in the tub.



In the event of a fault an alarm will be displayed - see table of alarms.

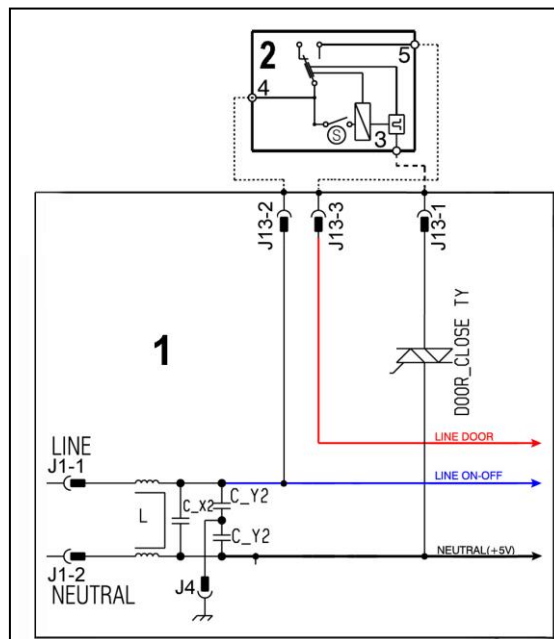
11.7 Door safety interlock

11.7.1 General characteristics



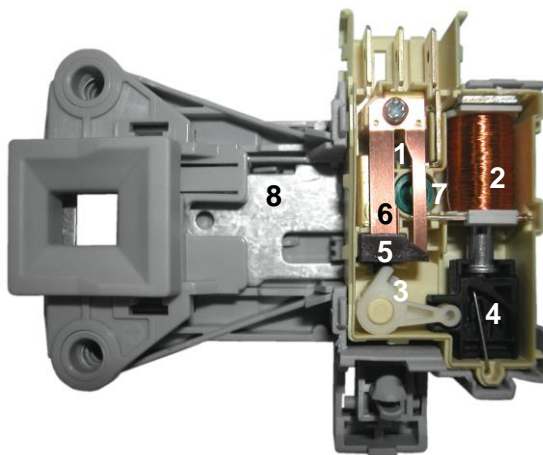
The instantaneous door interlock allows the door to be opened as soon as the drum stops, if the conditions described further are met.

- 1 Main circuit board
- 2 Door safety interlock



11.7.2 Operating principle

1. Solenoid protection PTC
2. Solenoid
3. Lifting assembly
4. Cam (Labyrinth)
5. Locking pin
6. Electrical contacts (main switch)
7. Door sensing switch
8. Cursor



- When the programme starts (start/pause button) the main circuit board sends a voltage pulse, lasting 20msec., to the valve (2) (at least 6 seconds should have passed since turning it on), which moves the cam (4) to a locking position; the blocking pin (5) is pushed locking the cursor (8), and simultaneously the main switch contacts are shut (6).
- When the programme ends or the Start/Pause button is pressed, the circuit board sends two additional 20 msec pulses (200 msec apart):
 - the first pulse moves the cam (4) by another position, without releasing the pin (5).

- the second pulse (which is only sent if everything is in working order) moves the cam (4) to another position, which causes the pin (5) to return to its position and therefore release the interlock; the contacts of the main switch are simultaneously opened.

– Solenoid protection

A PTC is connected in series to the solenoid to limit the current (and therefore any overheating) in the following cases:

- main circuit board triac short circuit
- many consecutive pressings of the start/pause button (more than 5 times)

Door open conditions

Before pulses are sent to open the door, the PCB checks for the following conditions:

- the drum must be stationary.
- the water level must not be higher than the lower edge of the door.
- the temperature of the water must not be higher than 40° C.

– Manual release device

The previous door safety devices opened the door automatically, in the event of: power failure or the appliance being turned off with the ON/OFF button (before the wash cycle ended) or valve malfunction or faulty main board, because inside they had a PTC bi-metal which allowed the door to be opened after cooling, between 55 seconds and 4 minutes.

The new device has a manual opening system, which allows the door to be opened following the instructions below:

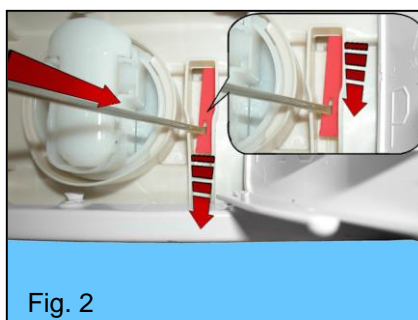
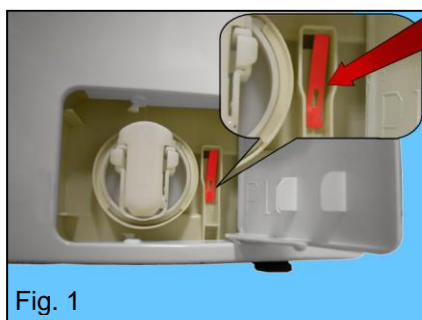
Before activating the manual opening of the door, check:

- If the water is above the lower level of the door, drain off the water; if possible set a drainage programme (or using the filter drainage knob after unplugging it from the mains socket)
 - ✓ Unplug the appliance from the socket.
 - ✓ Check that the drum is stationary.
 - ✓ Activate the manual opening system (see next paragraph).
- If the water is not above the lower level of the door, then it can be opened manually.

Manual opening

Do the following:

- 1) Open the filter flap (lower right hand side) and inside there is a small rod indicated by the arrow Fig. 1.
- 2) Insert a flat-tip screwdriver into the slit see Fig. 2 and push the small rod downwards and **simultaneously** activate the handle Fig.3 and open the door.

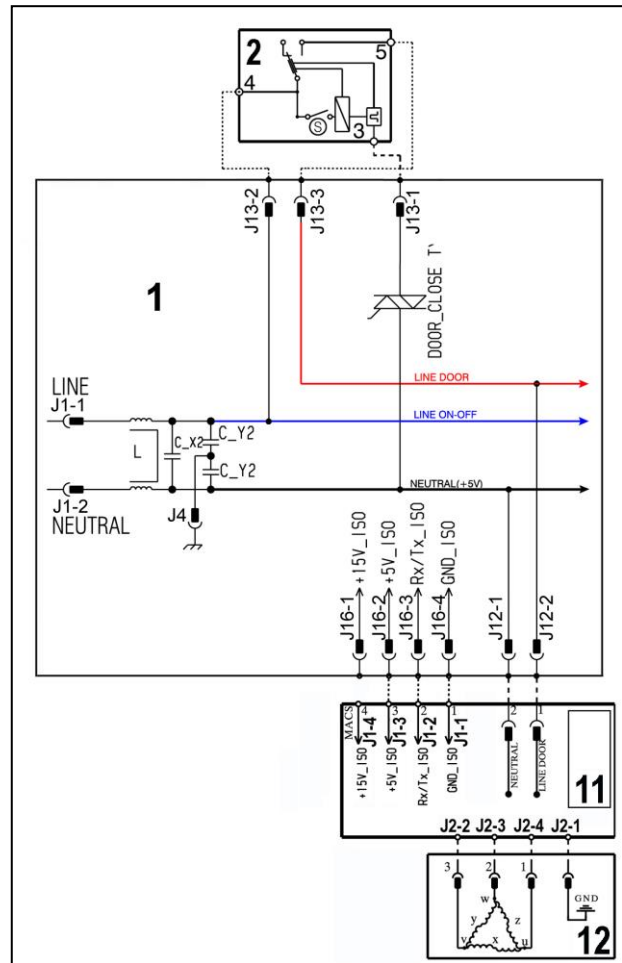


11.8 Three-phase asynchronous motor - Inverter

11.8.1 General characteristics

1. Main circuit board
2. Door safety interlock
11. Inverter
12. Motor

X-Y-Z = Motor Windings



11.8.2 Power supply to motor

Three-phase power is fed by the inverter (11), which sends through the connectors 5-6-7 the three phases to connectors 1-2-3 on the motor (nodes U-W-V), where the windings (Y-X-Z-) are connected. The phase shift between the phases is 120° and peak amplitude is 310V.

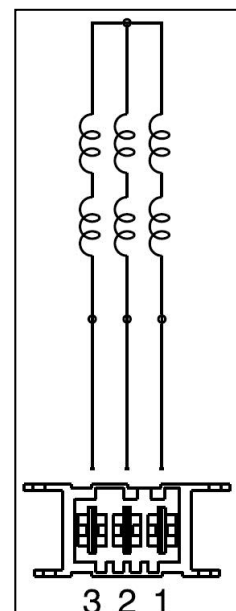
It is possible to get an idea of the efficiency of the motor by measuring the resistance of the coils:

Coil ohm 9.10 $\sim \pm 7\%$ (contacts 2-3)

Coil ohm 9.10 $\sim \pm 7\%$ (contacts 1-2)

Coil ohm 9.10 $\sim \pm 7\%$ (contacts 1-3)

In the event of a fault an alarm will be displayed - see table of alarms.



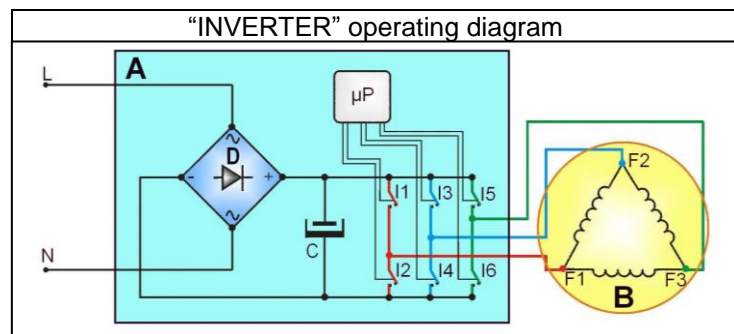
11.9 Inverter (UIMC)

11.9.1 General characteristics

The EWX11831 electronics use a new asynchronous motor, with 2 poles, three-phase, with high performance and low noise levels.

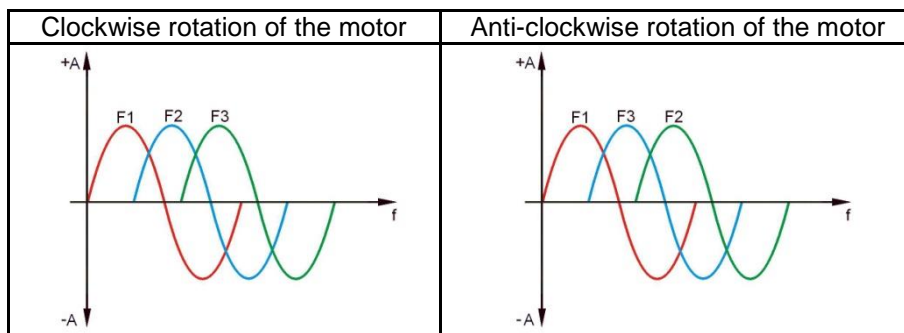


- L = Phase
- N = Neutral
- A = "INVERTER" board
- B = Motor
- C = Condenser
- D = Diodes
- I1÷6 = Switches
- F1÷3 = Motor connectors
- μP = Micro Processor



To transform the single-phase electricity (available in our homes) into three-phase electricity, a new circuit board is used (A) to transform the energy from single-phase to three-phase, which can be modulated in breadth and frequency respectively to adjust the power and number of revolutions of the motor.

Single-phase electricity (applied to connectors L-N), is rectified by the diode jumper (D), so there is a direct voltage of 310V at the ends of capacitor C, which through the combination of the opening and closing of switches I1÷I6 (piloted by the μprocessor) determines the piloting voltage and frequency of the motor.



The motors powered by this inverter do not have tachometric winding.

The inverter can detect / adjust the motor speed via the current absorption.

During the spin phases, the microprocessor can perform, depending on the software configuration, the anti-foam check, where featured, and the anti-unbalancing check.






- **Any work on electrical appliances must only be carried out by qualified personnel.**
- **Unplug the appliance before accessing internal components.**
- **After disconnecting the plug from the socket, wait about 2 minutes before removing the "INVERTER" plastic cover, thus allowing any condensers to discharge and avoid an electric shock.**

In the event of a fault an alarm will be displayed - see table of alarms.

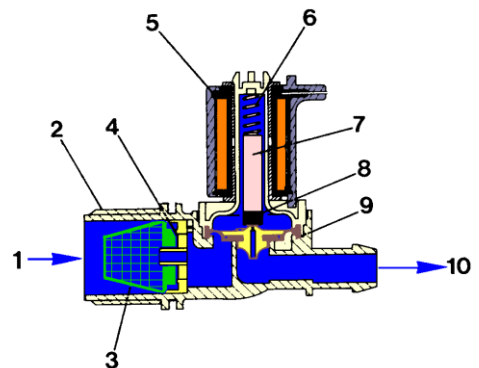
11.10 Solenoid valves

11.10.1 General characteristics

SOLENOID VALVE HOT WATER	SOLENOID VALVE TWO WAYS	SOLENOID VALVE THREE WAYS
		

This component introduces water into the detergent dispenser and is controlled electrically by the main circuit board via Triac. The level of water in the tub is controlled by the analogue pressure switch.

1. Water inlet
2. Solenoid valve body
3. Filter or needle trap
4. Flow reducer
5. Coil
6. Spring
7. Moving core
8. Rubber
9. Membrane
10. Water outlet



11.10.1.1 Operating principle

When idle, the core, pushed by a spring, keeps the central hole of the membrane closed and so the latter hermetically seals access to the water inlet duct.

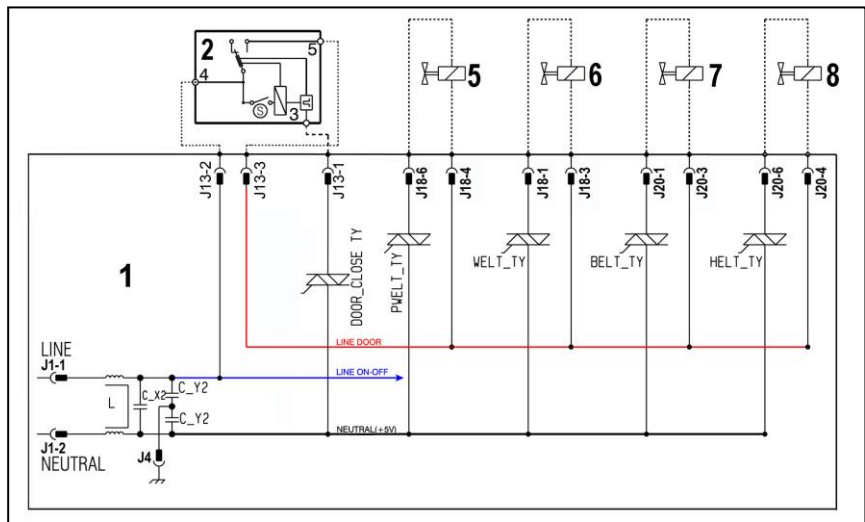
When the coil is powered, the core is attracted, releasing the central hole of the membrane. Consequently the valve opens.

11.10.1.2 Mechanical jamming of the solenoid valve

The solenoid valve may jam open without being actuated (which will cause flooding if the pressure switch controlling the water level does not trip). If this occurs, the electronic control system (which continuously monitors the flow sensor) will lock the door, start the drain pump and display an ALARM simultaneously.

11.10.1.3 Low water pressure

If the flow sensor does not generate a signal during the water fill phases, even though power is being supplied to the solenoid valve, the cause of this condition may be a closed water tap or clogged filter on the solenoid valve (with ensuing low water pressure). If this occurs, only a WARNING will be displayed and the cycle will continue for five minutes, after which time an ALARM will be signaled.



1. Main circuit board
2. Door safety interlock
5. Pre-wash solenoid
6. Wash solenoid
7. Bleach solenoid valve
8. Hot water solenoid

12 ALARM SUMMARY TABLE

Alarm Code	Alarm Description	Fault Condition	Possible Fault	Machine Action/Status	Reset Key
E11	Difficulties in water fill for washing	Water load timeout expired (load timeout for water loads at level)	Tap closed or water flow too low Wrong drain pipe position Water inlet valve defective Air trap system leaking Pressure switch defective Wiring or main board defective	Cycle Paused with door locked	START RESET
E12	Water load problems during drying cycle	Water load timeout expired during fabric detach phase (5 minutes - closed tap test)	Water tap closed or water flow too low Wrong drain pipe position Water inlet valve defective Air trap system leaking Pressure switch defective Wiring or main board defective	Cycle Paused with door locked	START RESET
E13	Water leakage	Global water load timeout expired (maximum water quantity reached)	Wrong drain pipe position Water flow too low Water inlet valve defective Air trap system leaking Air trap systems clogged Pressure switch defective	Cycle Paused with door locked	START RESET
E21	Difficulties in draining for washing	Water drain timeout expired (measured for each drain phase of a washing cycle)	Drain pipe blocked up Blocked/dirty filter Drain pump defective Pressure switch defective Wiring or main Board defective Drain pump rotor locked	Cycle Paused (after 2 attempts)	START ON/OFF RESET
E22	Water drain problems during drying cycle	Virtual anti-boiler pressure switch ON during a drying cycle	Drain pipe blocked up Blocked/dirty filter Drain pump defective Pressure switch defective Wiring or main Board defective	Cycle Paused	START RESET
E23	Drain pump triac failure	Incongruence between drain pump triac sensing and triac status	Drain pump defective Wiring or main board defective	Safety Drain cycle. Cycle stops with door unlocked	RESET
E24	Drain pump triac sensing failure	Wrong input signal to microprocessor	Main board defective	Safety Drain cycle. Cycle stops with door unlocked	RESET
E25	Aqua control sensing failure	Wrong input signal to microprocessor	Main board defective	Safety Drain cycle. Cycle stops with door unlocked	RESET

Alarm Code	Alarm Description	Fault Condition	Possible Fault	Machine Action/Status	Reset Key
E31	Electronic pressure switch faulty	Frequency of electronic pressure switch out of limits	Pressure sensor defective Wiring or main Board defective	Cycle blocked with door locked	RESET
E32	Electronic pressure switch calibration problems	Frequency of electronic pressure switch not stable during draining phase	Water inlet valve defective Air trap system leaking Pressure switch/sensor defective Drain pipe blocked up Blocked/dirty filter Drain pump defective Wiring or main board defective	Cycle Paused	START RESET
E35	Water Overload	Overload pressure switch on full state for a time longer than 15 seconds	Water inlet valve defective Air trap systems leaking Pressure switch defective Wiring or main board defective	Cycle blocked Safety drain cycle. Drain pump always in operation (5 minutes ON, 5 minutes off, etc)	RESET
E38	Air trap system clogged	Water level doesn't change for at least 30 sec. during drum rotations	Air trap system clogged Pressure sensor pipe clogged Motor belt broken	Heating Phase skipped	RESET
E41	Door opened	Door lock timeout expired (20 seconds)	Door lock device defective Wiring or main board defective	Cycle Paused	START RESET
E42	Door lock device failure	Door still locked when opening (timeout of 4 minutes)	Door lock device defective Wiring or main board defective Current leakage between heater element and earth	Cycle Paused	START RESET
E43	Door lock device triac failure	Incongruence between door lock device triac sensing and triac status	Door lock device defective Wiring or main board defective	Safety Drain cycle activation. Cycle blocked	RESET
E44	Door closed sensing failure	Wrong input signal to microprocessor	Main board defective	Safety Drain cycle activation. Cycle blocked	RESET
E45	Door triac sensing failure	Wrong input signal to microprocessor	Main board defective	Safety Drain cycle activation. Cycle blocked	RESET
E52	Tachometer faulty	Bad or no signal from tachometer	Motor defective Motor Wiring or Motor Control board defective	Cycle blocked after 5 attempts with door locked	ON/OFF RESET
E57	FCV Current trip	High current on inverter (>15A)	Motor defective Motor Wiring or Motor Control board defective	Cycle blocked after 5 trials with door locked	ON/OFF RESET
E58	FCV Over current	High current on motor phase (>4.5A)	Motor defective, Motor Wiring or Motor Control board defective, abnormal working condition	Cycle blocked after 5 trials with door locked	ON/OFF RESET
E59	FCV Not Following	No tacho signal from tachometer for 3 seconds	Motor defective Motor Wiring or Motor Control board defective	Cycle blocked after 5 trials with door locked	ON/OFF RESET

Alarm Code	Alarm Description	Fault Condition	Possible Fault	Machine Action/Status	Reset Key
E5A	FCV Heating	High temperature on Heat Sink (>88°C) or NTC of FCV board open	Over load condition, Motor Control board defective	Cycle blocked after 5 trials with door locked	ON/OFF RESET
E5H	FCV Under Voltage	Dc bus voltage below the allowed value (175V)	FCV mains wiring Motor Control board defective	Cycle blocked after 5 trials with door locked	ON/OFF RESET
E5C	FCV Over Voltage	Dc bus voltage above the allowed value (430V)	Motor Control board defective Power line voltage too high	Cycle blocked after 5 trials with door locked	ON/OFF RESET
E5D	FCV Unknown Message	Message received by FCV is not correct	Transmission line noisy / FCV defective MB defective Communication wiring problems	---	ON/OFF RESET
E5E	FCV-MB Communication	Protocol communication between FCV and MB not aligned	Wiring defective FCV defective, WD defective, UI defective MB defective, Weight defective	Cycle blocked after 5 trials	ON/OFF RESET
E5F	FCV Fault	FCV control board is continuously in reset	FCV control board defective or communication wiring problems or main board defective	Cycle blocked after 5 trials with door unlocked	ON/OFF RESET
E61	Insufficient heating during washing cycle	Washing heating timeout expired	Washing NTC defective Washing heater element defective Wiring or main board defective	Heating phases skipped	START RESET
E62	Overheating during washing cycle	Water temperature higher than 88°C for a time longer than 5 minutes	Washing NTC defective Wash heater element defective Wiring or main board defective	Safety Drain cycle Cycle stopped with door unlocked	RESET
E66	Heater or drying relay failure	Incongruence between heater relay sensing and relay status	Main board defective Current leakage between Wash/drying heater element and earth	Safety load cycle. Stop of the cycle with door locked	ON/OFF RESET
E68	Ground current leakage	Voltage value on heater sensing (wash or dry) different from Vmains value	Current leakage between wash or dry heater element and earth	Cycle blocked with door opened	START RESET
E69	Washing heating element opened	Voltage value different from Vmains value when heating element is not powered during the cycle execution	Wash heating element faulty (thermo fuses opened) Wiring defective Main board defective	No actions	START ON/OFF RESET
E6A	Heating relay sensing failure	Wrong input signal to microprocessor	Main board defective	Cycle blocked with door locked	RESET
E71	Washing NTC failure	Wrong input signal to microprocessor (open circuit or short circuit)	Washing NTC defective Wiring or main board defective	Heating phases skipped	START RESET
E72	Output drying NTC failure	Voltage value out of limit (open circuit or short circuit)	Output drying NTC defective Wiring or WD board defective	Drying heating phases skipped	START RESET

Alarm Code	Alarm Description	Fault Condition	Possible Fault	Machine Action/Status	Reset Key
E73	Input drying NTC failure	Voltage value out of limit (open circuit or short circuit)	Input drying NTC defective Wiring or WD board defective	Drying heating phases skipped	START RESET
E74	Washing NTC badly positioned	The washing temperature does not increase	Washing NTC sensor badly positioned, NTC sensor faulty, Wiring or main board defective	Heating phases skipped	RESET
E83	Wrong selector reading	Selector position code value not supported by the configuration data	Wrong configuration data on microprocessor Main board defective	Reset cycle	START RESET
E84	Recirculation pump triac sensing failure	Wrong input signal to microprocessor	Main board defective	Safety Drain cycle. Cycle stops with door unlocked	RESET
E85	Recirculation pump triac alarm	Incongruence between triac sensing and triac status	Recirculation pump defective Wiring or main board defective	Safety Drain cycle. Cycle stops with door unlocked	RESET
E86	Selector table configuration error	Incorrect configuration of the User Interface	Wrong or missing selector configuration data on UI microprocessor - User interface defective	---	START ON/OFF RESET
E87	User Interface microcontroller fault	User interface microcontroller damaged	User interface defective	No actions to be performed. If still present replace the User Interface Board	START ON/OFF RESET
E91	UI-MB communication error	Communication problem between UI and MB	Wiring defective, or UI, MB, Motor, WD , Weight board defective,	---	RESET
E92	UI-MB protocol incongruence error	Protocol communication between UI and MB not compatible	Main board incompatible with user interface board	Cycle blocked	OFF/ON
E93	Machine configuration error	Incorrect configuration of appliance	Incorrect configuration data Main board defective	Cycle blocked	OFF/ON
E94	Cycle Configuration error	Incorrect configuration of washing cycles	Incorrect configuration data Main board defective	Cycle blocked	OFF/ON
E97	Incongruence between selector and cycles configuration	Incongruence between program selector and cycle configuration	Incorrect configuration data Main board defective	Cycle blocked	RESET
E98	FCV_MB protocol incong. Error	Protocol communication between FCV and MB not aligned	Main board incompatible with FCV control board	Cycle blocked	OFF/ON
E9C	User Interface Configuration fault	Configuration wrongly or not received	Display Board	No actions	ON/OFF START RESET
E9E	UI touch fault	Touch display not working	Display Board	No actions	OFF/ON

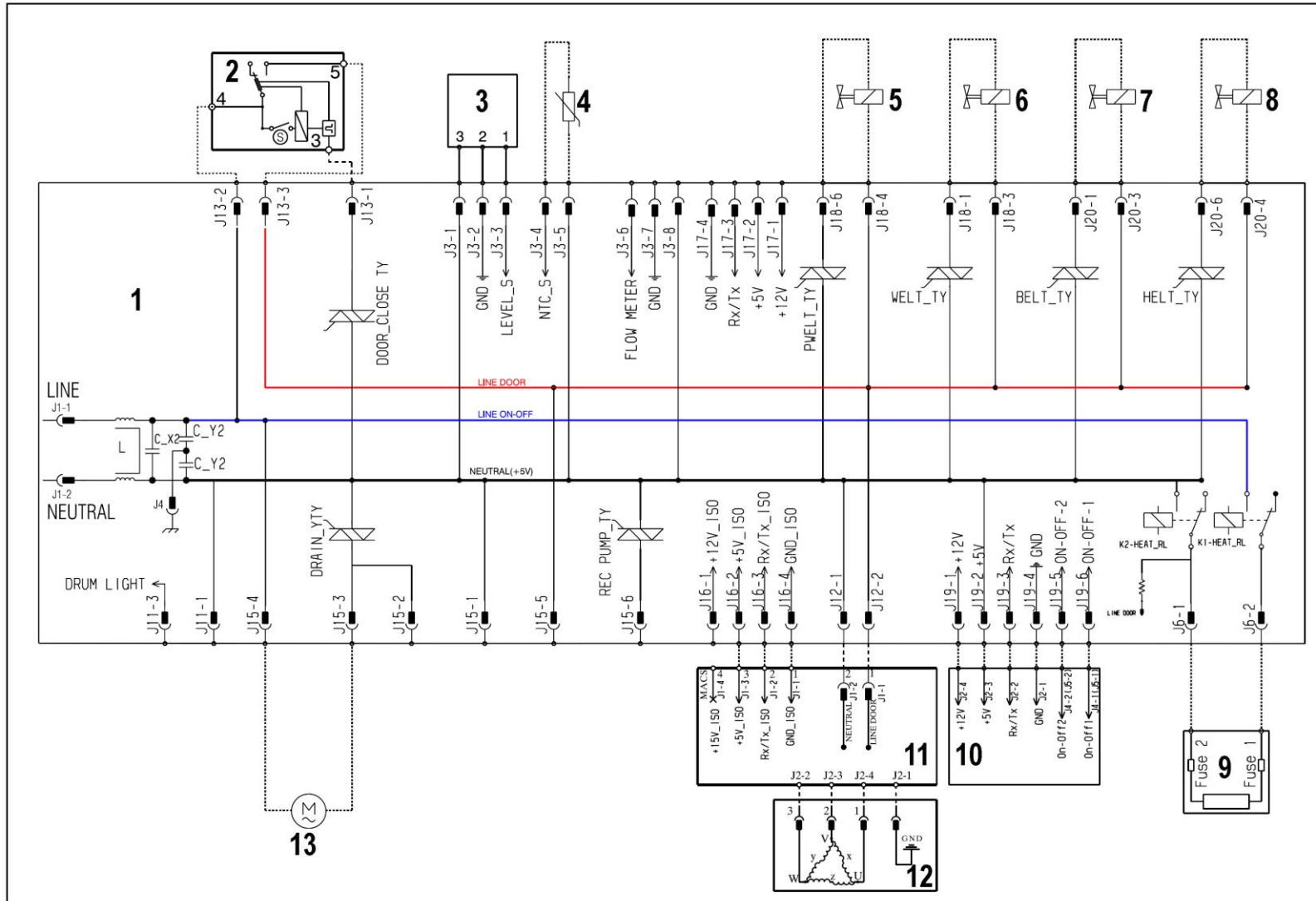
Alarm Code	Alarm Description	Fault Condition	Possible Fault	Machine Action/Status	Reset Key
EA1	DSP system failure	Not drum position sensing during motor activation	Wiring or main board defective DSP sensor failure Main motor belt broken	Skip of the drum positioning phase	START RESET
EA6	DSP door open failure	Not sufficient number of tachometer impulses during motor activation	Wiring or main board defective Main motor belt broken Lid open	Cycle paused	START RESET
EB1 (EH1)	Power supply frequency out of limits	Power supply period lower/higher than configured values	Wrong or disturbed Power Supply line. Main board defective	Wait for nominal power supply conditions	OFF/ON
EB2 (EH2)	Power supply voltage too high	MAIN_V sensing input voltage value greater than configured value	Wrong or disturbed Power Supply line. Main board defective	Wait for nominal power supply conditions	OFF/ON
EB3 (EH3)	Power supply voltage too low	MAIN_V sensing input voltage value lower than configured value	Wrong or disturbed Power Supply line. Main board defective	Wait for nominal power supply conditions	OFF/ON
EBD (EHD)	Heater WD relay sensing alarm	Wrong input signal to microprocessor	Main board defective	Cycle blocked with door locked	RESET
EBE (EHE)	FCV Relay failure	Incongruence between safeties relay sensing and FCV relay status	FCV Relay defective FCV sensing circuit defective Wiring or main board defective	Safety Drain cycle activation, stop of the cycle with door opened	RESET
EC1	Electro valves blocked	Flow meter running with electro valves switched OFF	Electro valves defective/blocked Main board defective	Cycle blocked Water drain up to anti-boil level or max. 5 minutes with door locked. When O.L. blocked drain pump ON/OFF for 5/5 minutes continuously	RESET
EC2	Weight sensor communication error	Communication problem between Weight sensor and MB	Wiring defective Weight Sensor defective MB defective	No actions	START RESET
EC3	Weight sensor fault	Signal coming from sensor out of limits	Weight sensor defective Main board defective Wiring	No actions	START RESET
EC8	TY5 triac failure	Incongruence between TY5 triac sensing and triac status	TY5 triac load device defective (motor fan/hot valve/water softener board) Wiring or main board defective	Safety Drain cycle activation. Cycle blocked	RESET
EC9	TY5 triac sensing failure	Wrong input signal to microprocessor	Main board defective	Safety Drain cycle activation. Cycle blocked	RESET

Alarm Code	Alarm Description	Fault Condition	Possible Fault	Machine Action/Status	Reset Key
ECA	WSD board communication alarm	No communication between motherboard and WSD board	WSD board defective Wiring between MB and WSD, Main Board defective, UI defective, Weight defective, FCV defective	Cycle blocked	START ON/OFF RESET
ECB	WSD board failure	WSD board defective : external sensor defective (level or density), diverter faulty, pump faulty, microcontroller damaged, power supply out of limits	WSD assembly defective	Cycle blocked	START ON/OFF RESET
ED1	WD board communication alarm	No communication between motherboard and WD board	WD board defective Wiring between MB and WD, Main Board defective, UI defective, Weight defective, FCV defective	Cycle blocked	START ON/OFF RESET
ED2	WD heating element1 relay failure	Incongruence between WD heating1 relay sensing and heating1 relay status	WD board defective wiring, thermostats defective, Main Board defective	Skip drying phase	START ON/OFF RESET
ED3	WD heating element1 sensing relay failure	Signal out of the limits	WD board defective	Skip drying phase	START ON/OFF RESET
ED4	WD heating element2 relay failure	Incongruence between WD heating2 relay sensing and heating1 relay status	WD board defective wiring, thermostats defective, Main Board defective	Skip drying phase	START ON/OFF RESET
ED5	WD heating element2 sensing relay failure	Signal out of the limits	WD board defective	Skip drying phase	START ON/OFF RESET
ED6	WD thermostat sensing failure	Signal of thermostat sensing out of limits	WD board defective	No actions	START ON/OFF RESET
ED7	WD thermostat failure	With satellite board: Incongruence between WD heating 1 and 2 relay sensing or thermostat sensing out of limits. Without satellite: Incongruence between heater and drying relay sensing.	Manual or automatic thermostat opened, wiring , WD board defective, drying heater element,	No actions	START ON/OFF RESET
ED8	WD fan motor tachometer absent	Bad or no signal from tachometer	Fan Motor defective Fan Motor Wiring or WD board defective	Skip drying phase	ON/OFF RESET

Alarm Code	Alarm Description	Fault Condition	Possible Fault	Machine Action/Status	Reset Key
ED9	WD fan motor driving circuit alarm	Incongruence between fan motor status and the driving circuit sensing signal	WD board defective	Skip drying phase	ON/OFF RESET
EDA	WD Power Supply alarm	Power supply period lower/higher than configured values or power supply values out of limits	Wrong or disturbed Power Supply line. WD board defective	Wait for nominal power supply conditions	START ON/OFF RESET
EDB (EDH)	WDM microcontroller fault	WDM microcontroller damaged	WDM board defective	No actions to be performed. If still present replace the WDM Board	START ON/OFF RESET
EDC	WDM heating element opened	Incongruence between WDM heating 1 and 2 relay sensing	Drying heating elements opened, unplugged, or wiring	No actions	START ON/OFF RESET
EF1	Filter clogged warning	Difficulties to drain. Virtual AB level remains in full state after an established time	Filter clogged or dirty Drain pipe clogged/kinked/too high	Warning displayed at the end of the cycle	START RESET
EF2	Foam warning	Virtual AB level in full state during spin phase at the end of the washing phase	Excessive detergent dosing Drain filter dirty or clogged Drain pipe kinked or clogged	Alarm displayed after 5 attempts (if specific LED configured)	RESET
EF3	Acqua Control warning	Acqua control sensing signal high (in appliance equipped with safety device)	Water on the basement Acqua Control defective	Drain pump activated	ON/OFF RESET
EF4	Water load low pressure	Flow meter stooped with electro valves switched on	Tap closed/low pressure of incoming water	No actions	RESET
EF5	Load too unbalanced	Final spin phase skipped due to a high unbalance load	Load unbalanced	No actions	START RESET
EF6	Safety reset	MB microcontroller damaged	Main Board defective	No actions to be performed. If still present replace the Main Board	-

13 DIAGRAMS

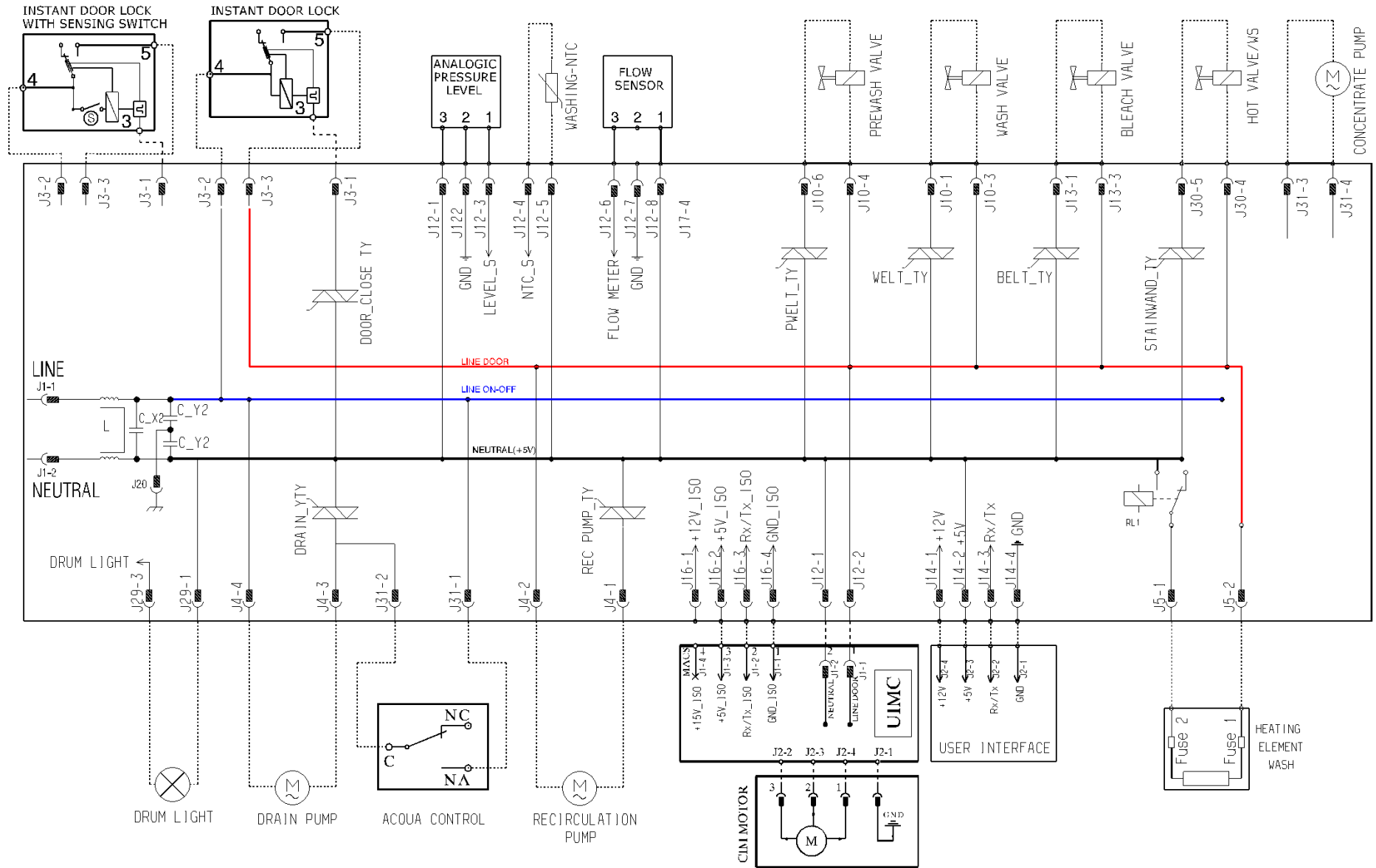
13.1 EWX11831 DIAGRAM WITH THREE-PHASE ASYNCHRONOUS MOTOR



13.1.1 Key to diagram

Appliance electrical components		PCB components	
1.	Main circuitboard	DRAIN_YTY	Drain pump Triac
2.	Door safety interlock	DOOR_CLOSE_TY	Door interlock Triac
3.	Electronic pressure switch	REC PUMP_TY	Circulation pump TRIAC switch
4.	NTC (washing)	PWELT_TY	Pre-wash solenoid Triac
5.	Pre-wash solenoid	WELT_TY	Wash solenoid Triac
6.	Wash solenoid	BELT_TY	Electronically controlled TRIAC bleach valve
7.	Bleach solenoid valve	HELT_TY	Hot water solenoid triac
8.	Hot water solenoid	K1	Heating element relay
9.	Heating element	K2	Heating element relay
10.	Display board		
11.	Motor control board (Inverter)		
12.	Triple-phase motor		
13.	Drain pump		

13.2 EWX14931 DIAGRAM WITH THREE-PHASE ASYNCHRONOUS MOTOR



14 WM ACCESSIBILITY

14.1 Worktp

Remove the screws that secure it to the back panel.

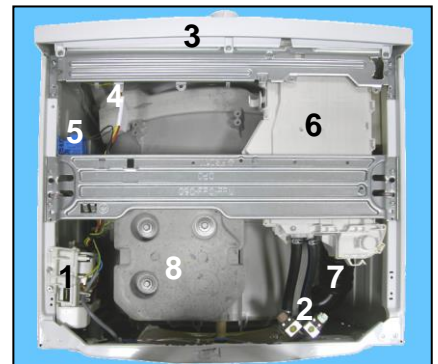


Pull it out from the back



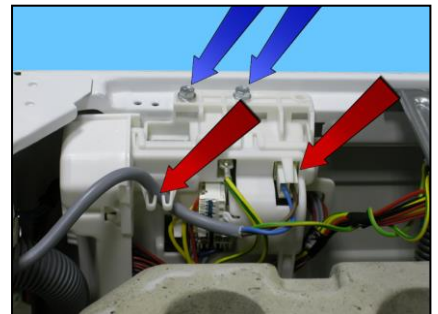
14.2 From the worktop, you can access

1. Main board
2. Solenoid valves
3. Control panel
4. Display board assembly
5. Electronic pressure switch
6. Detergent dispenser
7. Detergent fill pipe
8. Upper counterweight

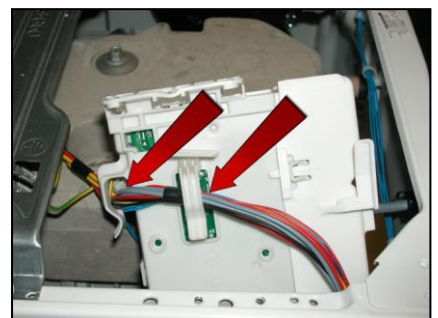


14.2.1 EWX11831 Main board

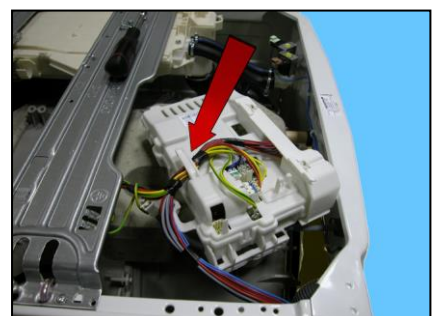
Remove the worktop (see relevant paragraph).
Remove the cable from the hooks and remove the connector (red arrows)
Unfasten the two screws securinit to the cabinet (blue arrows)



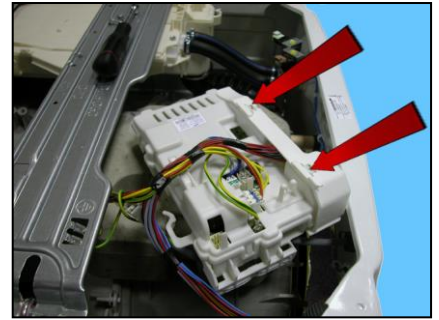
Remove the cabling from the two hooks (red arrows).



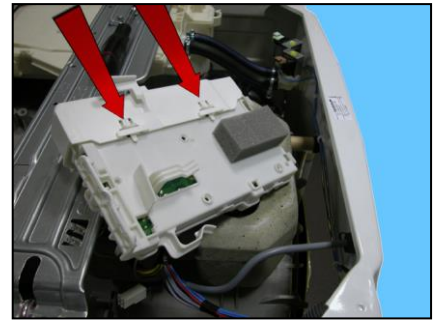
Remove the cabling from the hook (red arrow).



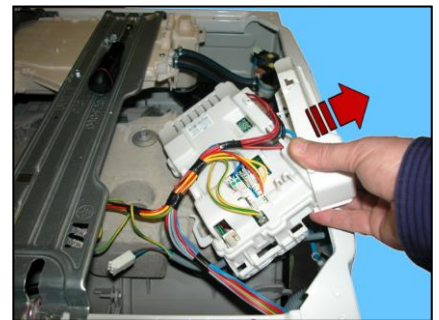
Disconnect the hooks fixing the connector protection on one side



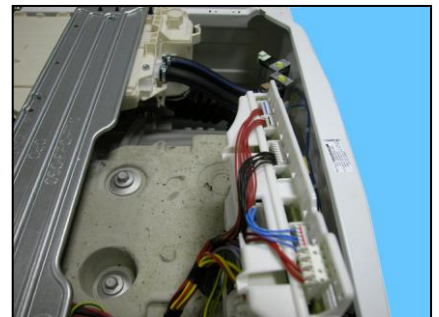
then the other



Remove the connectors protection



Pull out the connectors positioned beside the board.



Pull out the other connectors, taking care as they are retained by hooks.

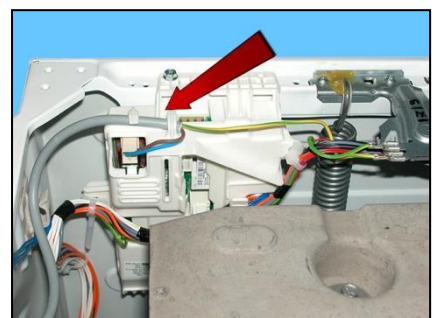


14.2.2 EWX14931 Main board

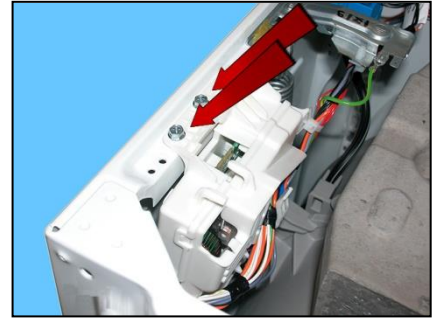
To service the main board, use the antistatic kit a code 4055063-95/4.

Remove the worktop (see relevant paragraph).

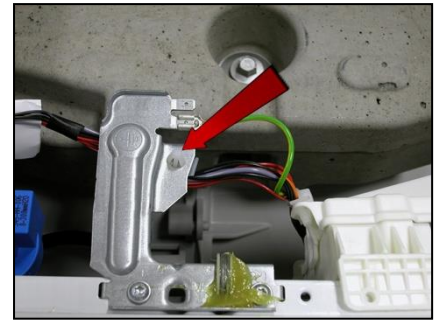
Remove the power cable from the hooks that hold it close to the board.
Slide off the connector.



Unfasten the two screws securing it to the cabinet.



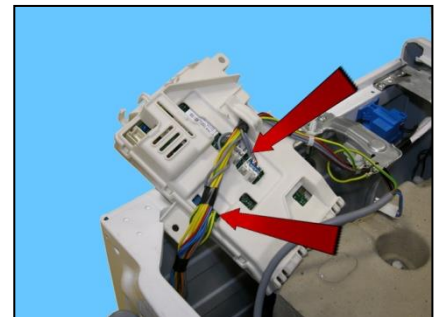
Remove the clamp that secures the wiring to the spring support bracket.



Using a pair of pliers, remove the clamps that secure the wiring to the power board assembly container (indicated by the arrows).

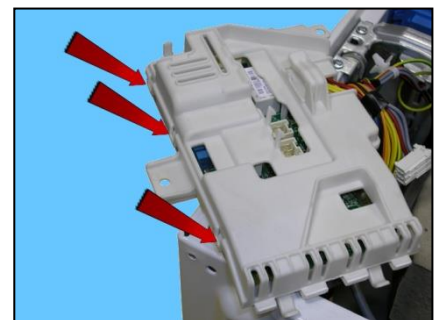


Position the board assembly as shown in the figure
Remove the connectors and the faston that connects the earth (beware as it is fitted with an anti-sliding stop).

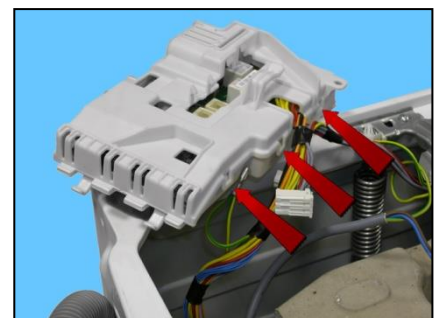


Remember to use the anti-sliding kit.

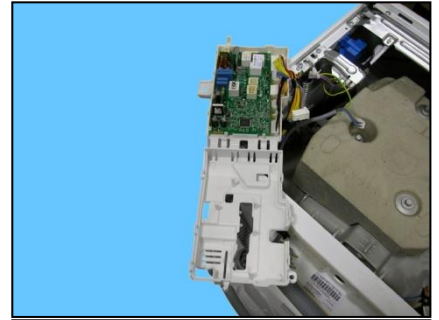
Unhook the three hooks that join the two casings on one side



and on the other.



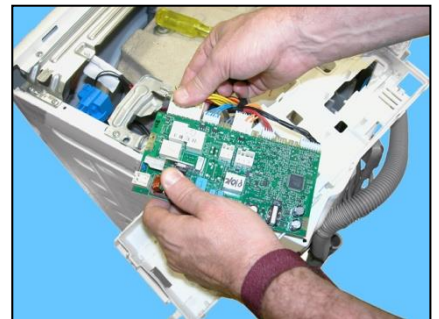
Lift the lid.



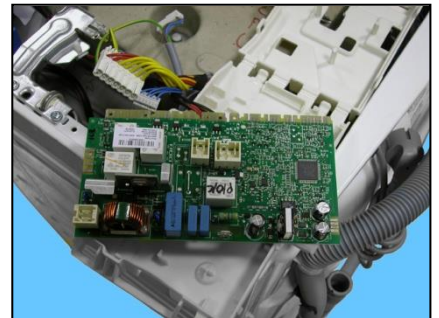
Release the three hooks that secure the board to the container and remove it (take care not to break the hooks).



Remove the connectors.



Board

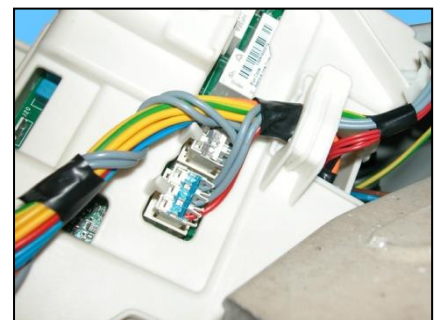


When reassembling.

Once you have inserted the connectors, make sure the wiring is inside the box. So that when the lid is closed, the wiring is not crushed or cut by the two plastic parts.

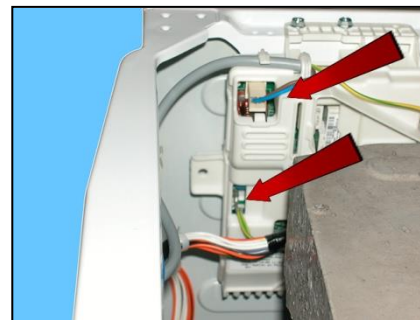


Fit the connectors into their proper slots and arrange the wiring as shown in the figure.



Before securing the side clamp:

Restore the earth connection, fit the power supply connector and insert it between the two hooks.



14.2.3 Solenoid valve

Remove the worktop (see relevant paragraph).

Disconnect the connectors (red arrows)

Pull out the pipes which connect the solenoid valve to the detergent dispenser (blue arrows).



Unscrew the water fill pipe from the solenoid valve.

Push the two retainers indicated by the arrows towards the inside of the appliance.

At the same time, turn the solenoid valve to remove it.



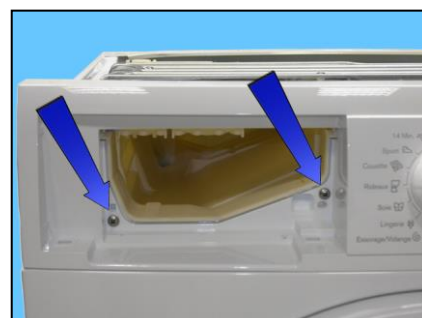
14.2.4 Control panel

Remove the worktop (see relevant paragraph).

Pull the detergent dispenser out and at the same time press the stop locking it in place.

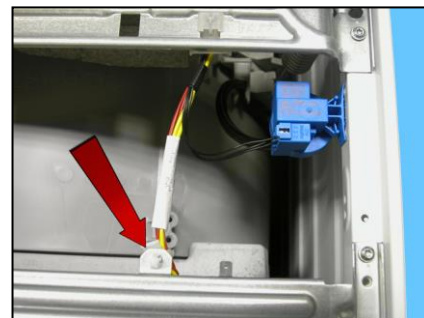


Loosen the screws that attach the control panel to the detergent tray.

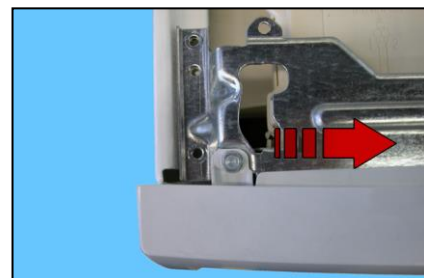


Pull out the clamp from the crosspiece

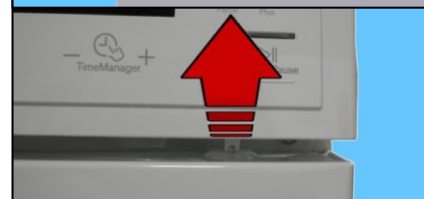
Remove the four screws which secure the crosspiece to the cabinet
Remove the screws which secure the crosspiece to the detergent dispenser.



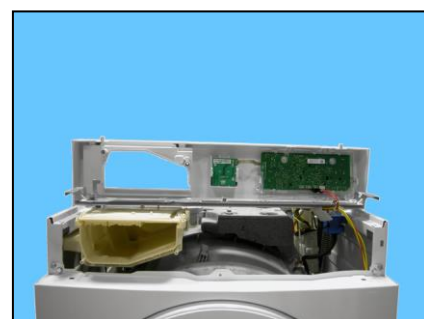
Release the anchor tab which secures the detergent dispenser to the crosspiece



Raise both sides of the control panel so as to pull out the hooks which secure it to the front panel.



Remove the control panel and position it as shown in the figure, making sure you introduce a protection to prevent scratching it.



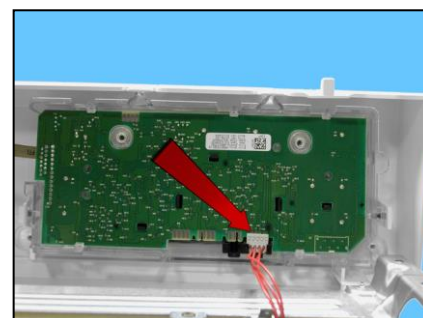
14.2.5 Display board and Selector assembly

Remove the worktop (see relevant paragraph).
Remove the control panel (see relevant paragraph).

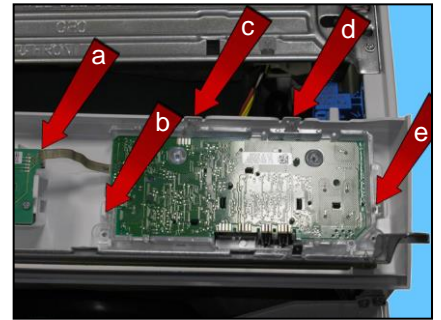


- **Warning the sensors located in the display boards could be at a potential of 220 Volts.**

Disconnect the connectors.

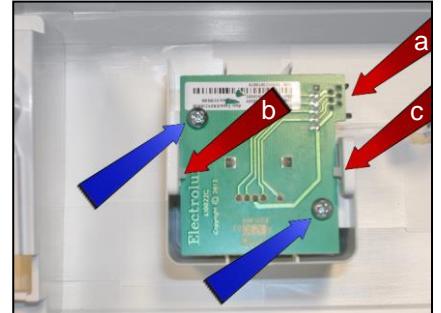


In order to remove the display board from the control panel disconnect the wire that connects it to the selector (a), unhook it from the hook that fix it to the control panel starting with the hook (b) and then (c, d, e).
Lift it up and remove it



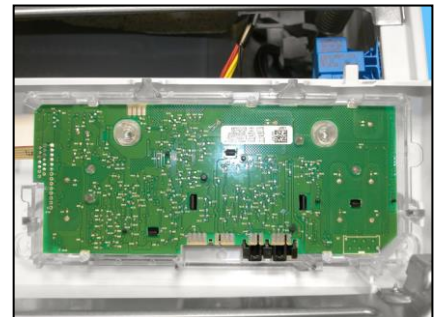
Selector control

Disconnect the connector (red arrow a)
Unscrew the two screws (blue arrows)
Unhook the hooks that fix it to the control panel (red arrows b, c)



When repositioning the display board, place it parallel with the control board, press the parts where the fastening hooks are so that the sensors are positioned correctly.

If a hook breaks, slots are envisaged to tighten the screws.

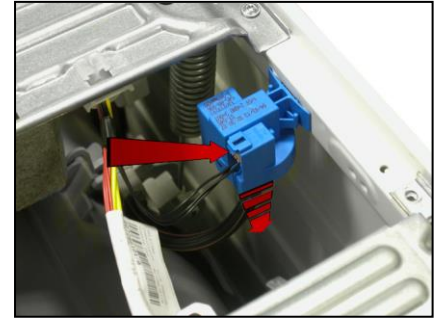


14.2.6 Analogue pressure switch

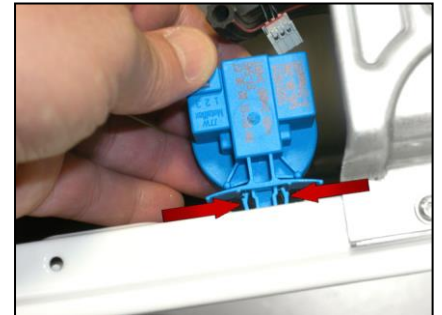
Remove the worktop (see relevant paragraph).

Remove the connector.

Pull out the small tube which connects it to the pressure chamber.



Tighten the two tabs which secure it to the cabinet and remove it.

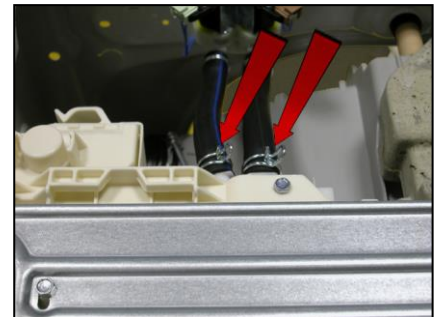


14.2.7 Detergent dispenser

Remove the worktop (see relevant paragraph).

Remove the control panel (see relevant paragraph).

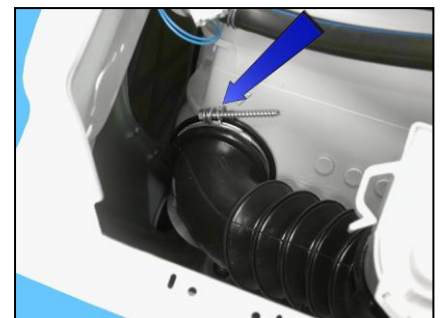
Pull out the pipes that connect it to the solenoid valves (cold water and where featured hot water)



Unfasten the two screws securing it to the central crosspiece.



Unfasten the screw in the clamp that fixes the detergent loading pipe to the tray, and remove it from its housing.



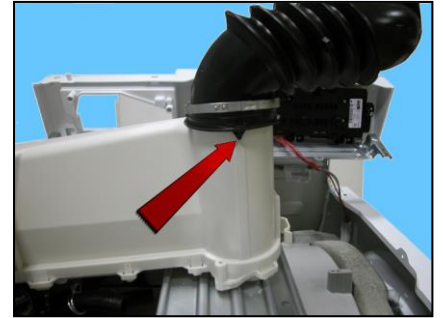
Remove the detergent dispenser.



14.2.8 Detergent fill pipe

Remove the worktop (see relevant paragraph).
Remove the control panel (see relevant paragraph).
Remove the detergent tray (see relevant paragraph).

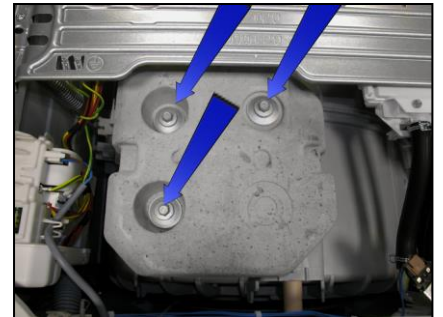
Pull out the pipe from the detergent dispenser after breaking/loosening the clamp between the detergent dispenser and the detergent loading pipe. When reassembling, use a new clamp with the same characteristics. The size of the clamp to use is 65.5 mm. When introducing the pipe into the dispenser, make sure the two references are aligned.



14.2.9 Upper counterweight

Remove the worktop (see relevant paragraph).
Remove the three screws that secure it to the welded tub.

When reassembling:
If the tub assembly is new, tighten the screws at a torque of 20 Nm.
If the tub assembly is not new, align with the existing thread and tighten the screws at a torque of 15 Nm.



14.3 Accessing the front part

From the front it is possible to access the following components:

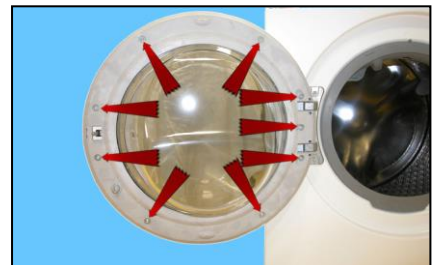
1. Door and Door Hinge
2. Door safety interlock
3. Drum light
4. Bellow seal
5. Blade
6. Front panel

14.3.1 Door hinge - Door

To replace the hinge, loosen the screws securing it to the cabinet.



To access the door, loosen the screws joining the two front and rear door frames together.

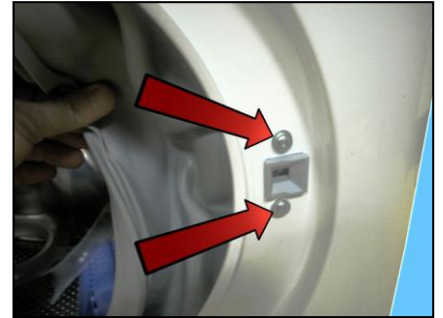


14.3.2 Door safety interlock

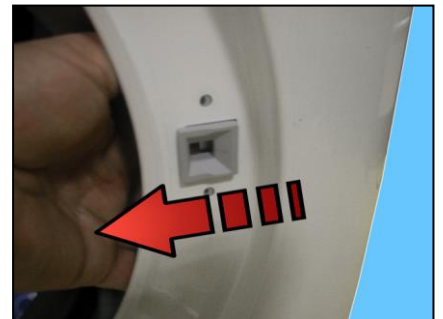
Remove the iron ring securing the bellow seal to the unit.
Remove the part of the bellow seal concerned from the unit.



Unfasten the two screws securing the door safety interlock to the front panel.



Take the device and move it to the left.



Turn it towards the inside (right-hand side of the flange).



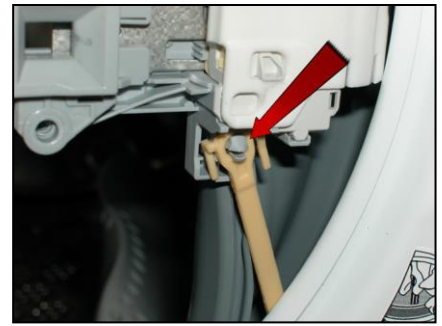
Pull it out towards the right and remove it.



Pull out the door safety interlock
Take care in the lower part of the device as there is a small rod.



Remove the small rod from the pin (after removal, it stays in the vertical position)

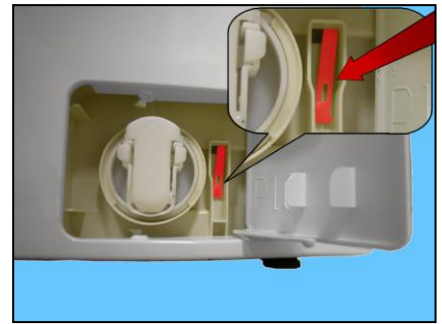


Pull out the wiring protection from the door safety interlock. Disconnect the connector.

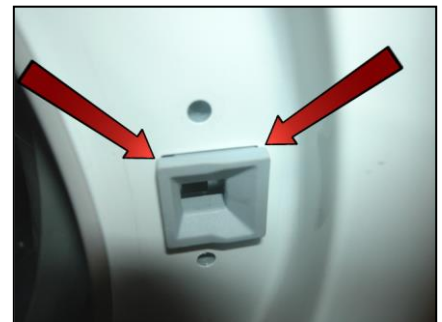


To reassemble the door safety interlock, repeat the same tasks in reverse order.

Make sure the small rod is correctly positioned with respect to the door safety device (see photo at the start of the page) and in its base as shown by the arrow (in the figure opposite)



Before tightening the screws to secure the door safety interlock to the front panel, make sure the flange is positioned properly on the outside as indicated by the arrows.



Tighten the screws at a torque of 2.5 Nm.

14.3.3 Bellow seal

Remove the iron ring securing the bellow seal to the unit. Release the bellows seal from the front panel.

Take the seal out of the welded tub. (take care as the seal is held in position by a snap ring)

When reassembling the seal
Lubricate with liquid soap the part where the tub is inserted.
Make sure the references are aligned.
Reassemble the snap ring between the door bellow seal and the tub.
Reassemble the iron ring between the door bellow seal and the cabinet.



14.3.4 Blade

This blade is secured to the drum with slides and secured with blades carved into the drum.

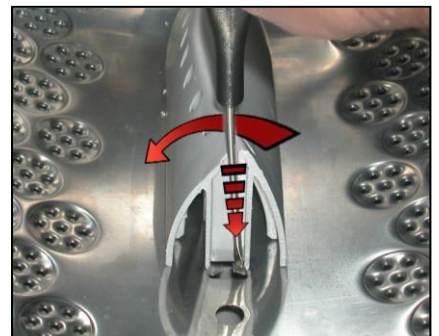
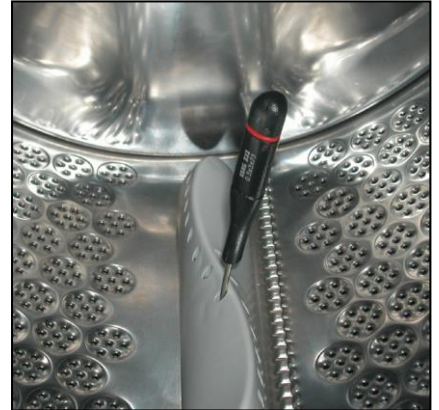
To remove it from the drum:

Insert a flat-tip screwdriver into the central slot of the left row.

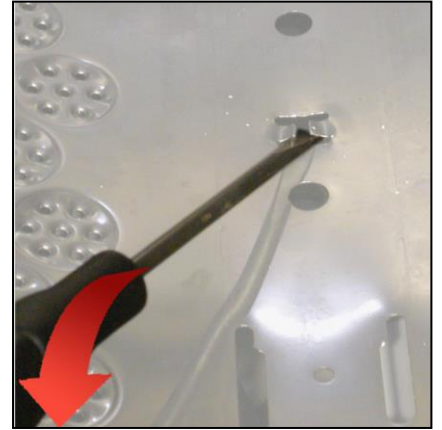
The screwdriver with the handle tilted towards the right
Push the left-hand tab downwards.

The screwdriver with the handle tilted towards the left
Push the right-hand tab downwards.

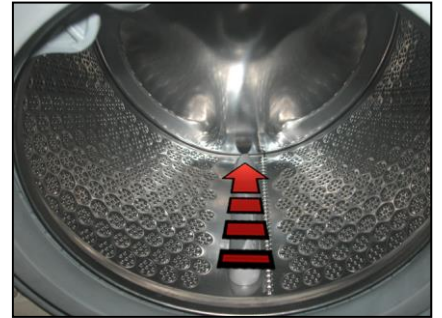
When the two tabs are down
Move the blade towards the front of the drum, and if necessary squash the blade at the two ends.



Before securing the new blade
insert a screwdriver beneath the tabs and raise them a little.



Position the new blade inside the drum guides.
Push it towards the back.



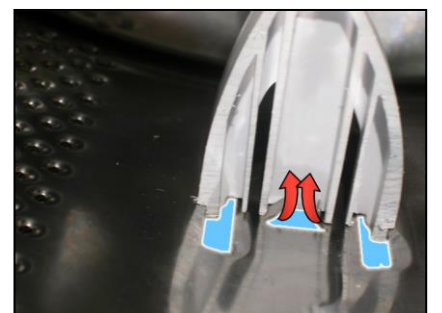
Insert the screwdriver (in the central slot of the left-hand row)
at a right angle to the blade, so as to position it at the centre of the two drum tabs.
Tilt it towards the right so that the left tab moves upwards.



With the screwdriver still inserted in the slot.
Tilt it towards the left so that the right tab moves upwards.



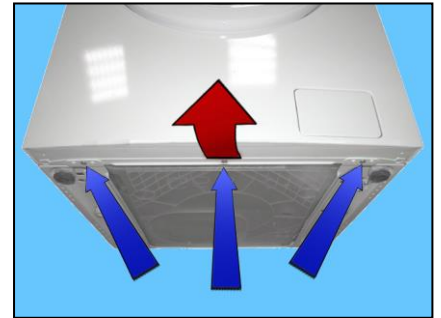
With the tabs raised, the blade is secured to the drum.



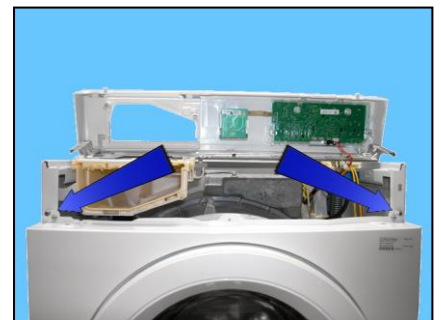
14.3.5 Front panel

Remove the worktop (see relevant paragraph).
Remove the control panel (see relevant paragraph).
Remove the iron ring and remove the door bellow seal from the front panel.
Unfasten the screws securing the door safety interlock.

Tilt the washing machine towards the back.
Unfasten the three screws securing the front panel at the bottom.
Unhook the front panel a little from its position (red arrow)



Unfasten the four screws securing the front panel to the sides (indicated by the arrows).



Remove the front panel



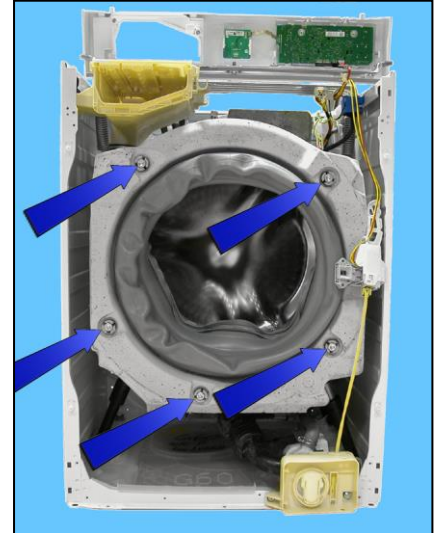
When re-assembling the front panel make sure the small rod of the door safety device is correctly positioned (see "Door safety device" paragraph)

14.4 From the front panel, you can access

1. The front counterweight
2. The shock absorbers
3. The drain water circuit
4. The pressure chamber
5. The tub suspension springs
6. The shock absorber pins

14.4.1 Front counterweight

Remove the worktop (see relevant paragraph).
Remove the control panel (see relevant paragraph).
Remove the iron ring securing the bellow seal to the front panel.
Unfasten the screws securing the door safety interlock (see related paragraph).
Remove the front panel (see relevant paragraph).
Unfasten the five screws securing the front counterweight to the welded tub assembly.
When tightening the screws, take care:
If the welded tub assembly is new, tighten the screws a a torque of **15Nm**.
If the welded tub assembly is not new, align with the existing thread and tighten the screws at a torque of **10÷12 Nm**.



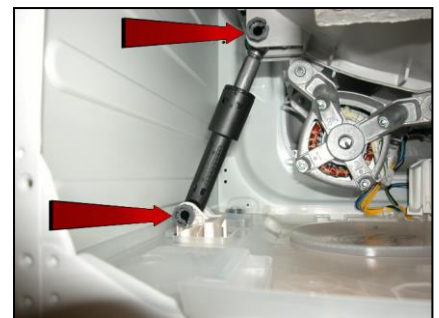
When re-assembling the front panel make sure the small rod of the door safety device is correctly positioned (see “Door safety device” paragraph)

14.4.2 Shock absorber

Remove the worktop (see relevant paragraph).
Remove the control panel (see relevant paragraph).
Remove the iron ring securing the bellow seal to the front panel.
Unfasten the screws securing the door safety interlock (see related paragraph).
Remove the front panel (see relevant paragraph).

Pull out the pins securing it to the tub and crosspiece.

To reposition the pins, see para. 12.4.6 page 76



When re-assembling the front panel make sure the small rod of the door safety device is correctly positioned (see “Door safety device” paragraph)

14.4.3 Drain water circuit

- Tub drain pipe

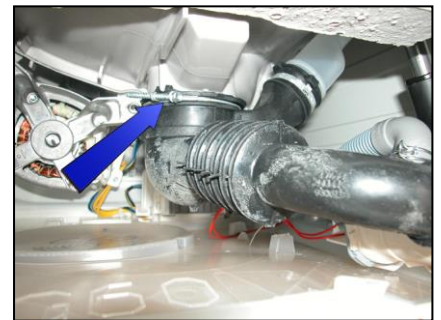
Remove the worktop (see relevant paragraph).
Remove the control panel (see relevant paragraph).
Remove the iron ring securing the bellow seal to the front panel.
Unfasten the screws securing the door safety interlock (see related paragraph).
Remove the front panel (see relevant paragraph).
Pull out the main drain pipe (1)
Loosen the screw of the clamp securing the tub drain pipe to the tub (2)
Pull out the pipe from the analogue pressure switch connecting the pressure chamber.
Release the pressure chamber (*See pressure chamber description*)
Pull out the tub drain pipe and pull out the pressure chamber (3).
Where clamps are present, you will need to open/break them. When reassembling, use clamps with the same characteristics.



When re-assembling the front panel make sure the small rod of the door safety device is correctly positioned (see “Door safety device” paragraph)

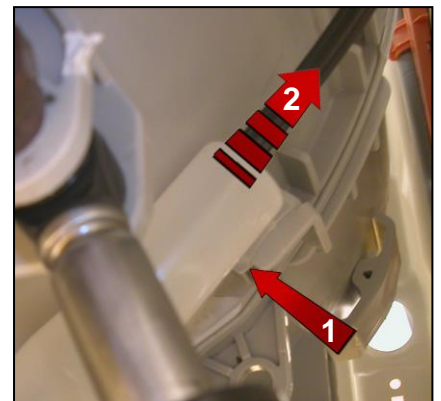
14.4.4 Pressure chamber

Remove the worktop (see relevant paragraph).
Remove the control panel (see relevant paragraph).
Remove the iron ring securing the bellow seal to the front panel.
Unfasten the screws securing the door safety interlock (see related paragraph).
Remove the front panel (see relevant paragraph).
Pull out the pipe from the analogue pressure switch and hooks securing it to the welded tub.



Unfasten the screw in the clamp that fixes the drain pipe to the welded tub and remove it from its position, pulling it out.

Push the hook (1) while at the same time lifting the chamber (2) from the support securing it to the tub.

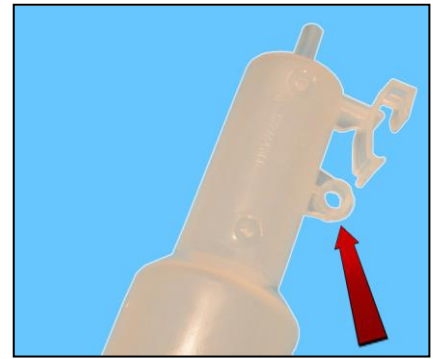


Turn the chamber under the tub and pull it out.



Make a note of the latch and hook with which it is secured to the tub.

If the hook securing the chamber to the welded tub is broken. Use the eyelet (indicated by the red arrow).



Use a screw Code 405 50 33-52/8 (AF/2P 5x16 TE/SP must have a maximum length of 16 mm and without a tip to avoid perforating the tub), secure the chamber to the tub as shown by the arrow in the photo.

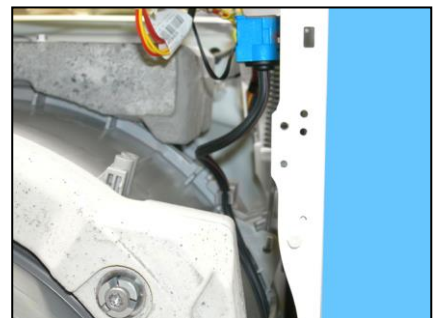


When repositioning the pressure chamber in the tub drain pipe, pay attention to the references.

The size of the clamp to use is 52.5mm.



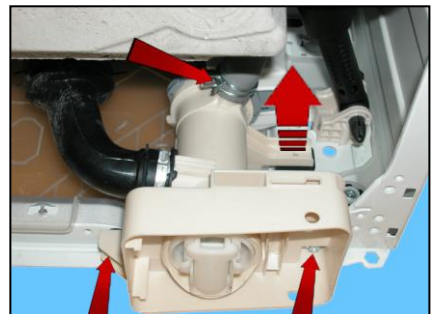
When reassembling the pressure chamber, reposition the pipe connecting the pressure switch so that it never actually touches the cabinet.



When re-assembling the front panel make sure the small rod of the door safety device is correctly positioned (see "Door safety device" paragraph)

- Filter body

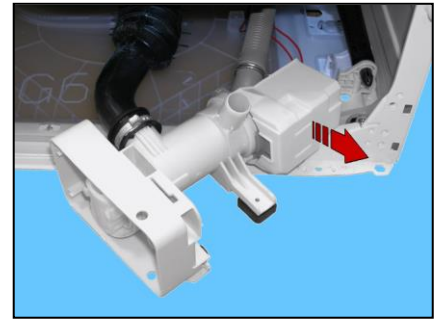
- Remove the worktop (see relevant paragraph).
- Remove the control panel (see relevant paragraph).
- Remove the iron ring securing the bellow seal to the front panel.
- Unfasten the screws securing the door safety interlock (see related paragraph).
- Remove the front panel (see relevant paragraph).
- Loosen the screws securing it to the front crossbar (1).
- Pull out the main drain pipe (2).
- Raise it to remove the support inserted in the side crossbar (3)



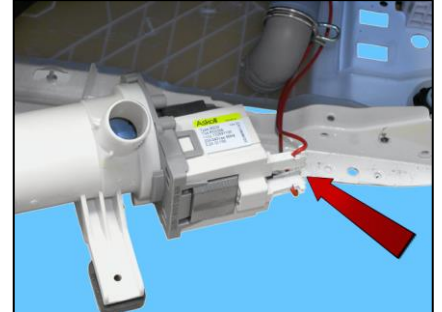
When re-assembling the front panel make sure the small rod of the door safety device is correctly positioned (see "Door safety device" paragraph)

- Drain pump

Remove the pump protection



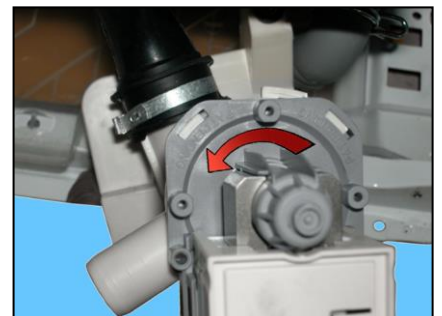
Remove the connectors



Rotate the lock catch with some pliers (take care not to break it)



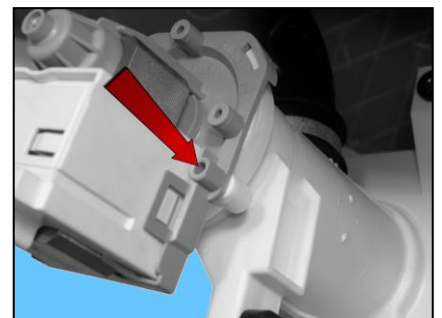
Simultaneously rotate the pump as shown by the arrow



If the lock catch securing the pump to the filter body breaks.

Secure the pump to the filter body, securing it in place using a screw, screwing the latter in the slot shown by the arrow.

Size of the screw 3.5x19 Code 5024 79 51- 00/2

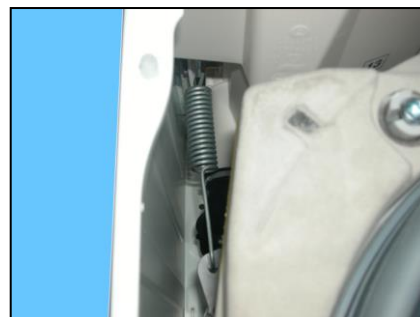


When re-assembling the front panel make sure the small rod of the door safety device is correctly positioned (see "Door safety device" paragraph)

14.4.5 Tub suspension springs

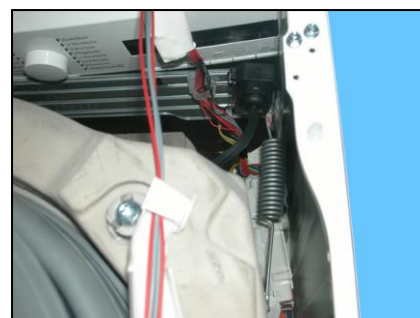
- Left spring

Attach the spring as shown in the figure: the shortest leg towards the crosspiece, whereas the longest leg towards the welded tub.



- Right spring

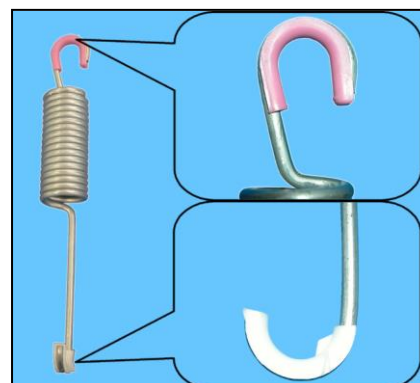
The instructions provided for the left spring also apply to the right spring.



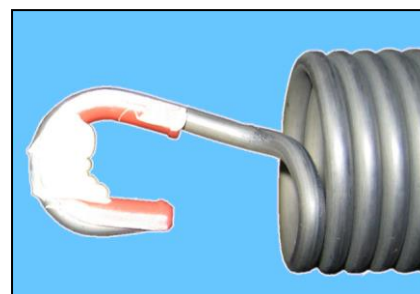
When reattaching the springs (after repair work which required their removal), make sure that the bushings shown in the figure are featured on both ends. Pay attention to the differences between the bushings (see enlarged details). Spare bushings are available, under the following codes:

Upper bushing Code 405 50 62-51/9

Lower bushing Code 405 50 62-52/7



Apply some grease on either end of the spring. Use grease Code 5026 24 16-00/6



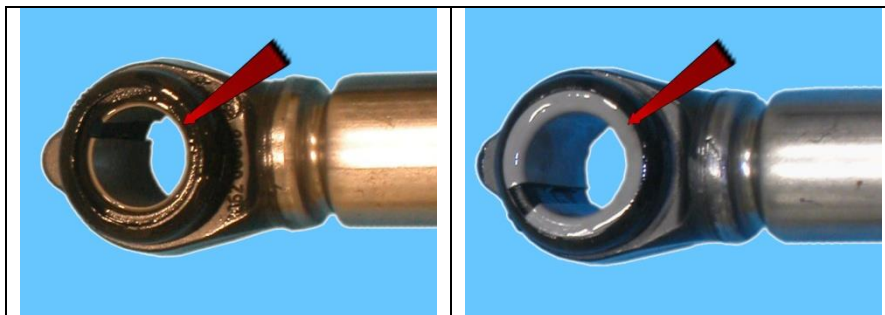
Attachment position of springs to top crosspiece.



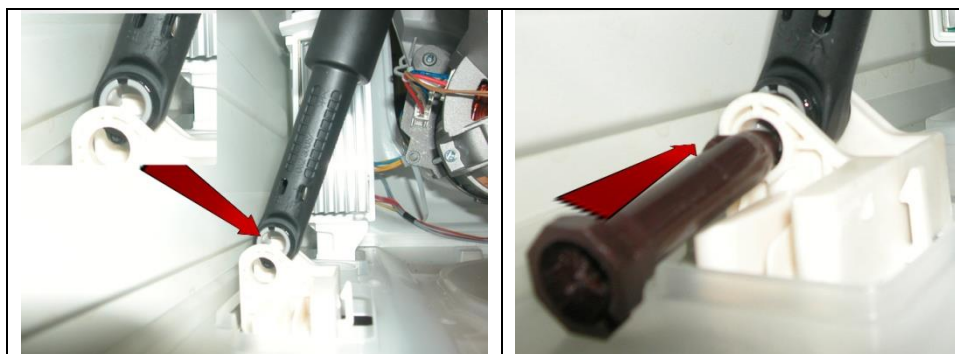
When re-assembling the front panel make sure the small rod of the door safety device is correctly positioned (see "Door safety device" paragraph)

14.4.6 Shock absorber pin

There is a bushing on either end of the shock absorber. It has a wider profile on one end to avoid it becoming dislodged when the pin is inserted (see the two figures below).



When positioning the shock absorber inside the fastening (situated at the bottom of the cabinet or in the tub), take care when positioning the bushing, so as to insert the pin from the part of the bushing with the widest profile. The spare bushing is supplied under Code 344 91 25-30/5



If you are having difficulty inserting the pin, grease it a little (code 5026 24 16-00/6).

When re-assembling the front panel make sure the small rod of the door safety device is correctly positioned (see "Door safety device" paragraph)

14.5 Accessing the rear part

14.5.1 Back panel

Loosen the screws that fix it to the cabinet



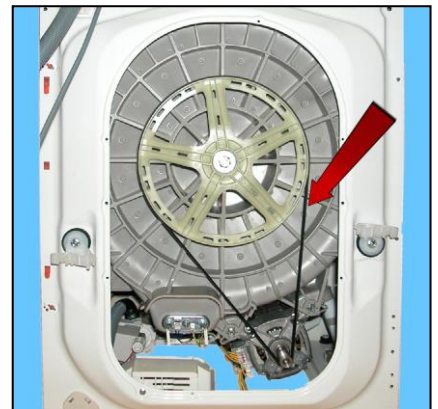
14.6 From the back panel, you can access

1. Belt
2. Plastic pulley ($\phi 273\text{mm}$)
3. Inverter
4. Motor
5. Resistance
6. Shock absorber

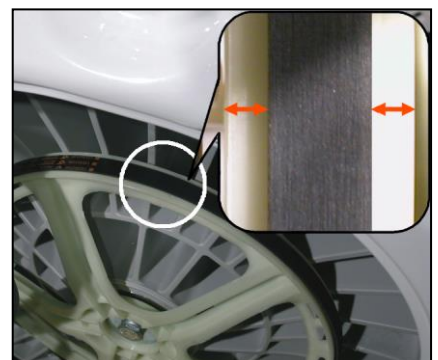


14.6.1 Belt

Remove the back panel (see relevant chapter).
Hold the belt, and by turning the pulley, remove it.



When reassembling:
Position the belt, and align it with the centre of the pulley ($\phi 273\text{mm}$) as shown in the figure.



Turning the pulley, check that the belt positions itself and remains in the central part of the pulley.

If necessary, adjust the position of the belt on the drive pulley, so that it is correctly positioned.



14.6.2 Plastic pulley (∅ 273mm)

Remove the back panel (see relevant chapter).
Remove the belt (see relevant chapter).
Insert a retainer to secure the pulley in place.
Unfasten the screw securing the pulley to the drum shaft.

Tighten the screw at a torque of 60 Nm.



14.6.3 Inverter

Remove the back panel (see relevant chapter).

Loosen the two screws that fix it to the cabinet

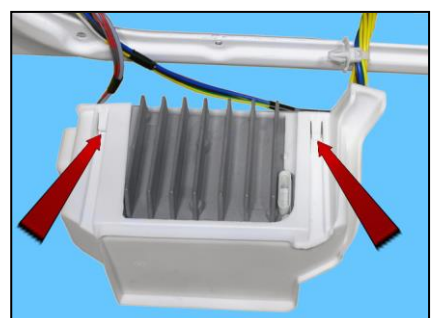
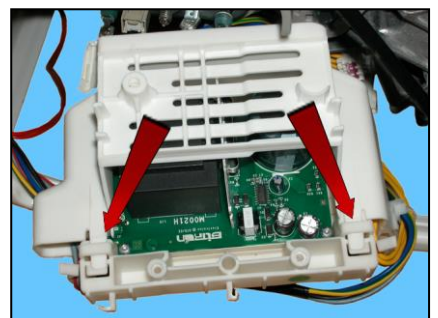
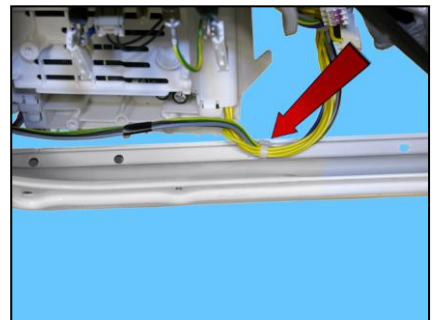
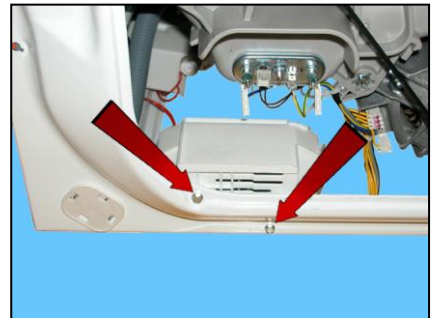
Pull out the clamp from the cabinet

Push the washing unit towards the inside of the appliance (if necessary)
Pull out the connectors of the heating element (if necessary)
Remove the Inverter (UIMC)

Disconnect the hooks fixing the connector protection on one side

Then on the other

Remove the connectors protection



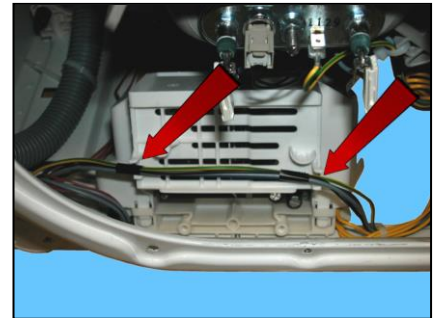
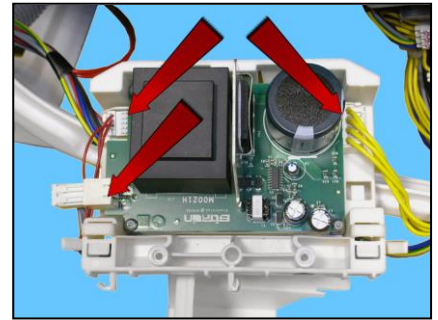
Carefully remove the connectors (they are blocked by anti-sliding hooks).



CAUTION:

Position the wiring carefully when re-assembling the UIMC (Inverter) and set it out as shown in the figure, inside the two rails cut into the UIMC lid (indicated by the arrows).

This is to avoid any wire being squashed / pressed against the cabinet with the risk of current leakage.



14.6.4 Motor

Remove the back panel (see relevant chapter).

Remove the belt (see relevant chapter).

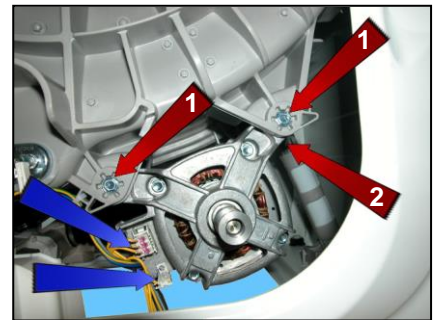
Disconnect the connectors: power supply and earthing (blue arrow) and also slip off the strap.

Loosen the two front fastening screws (1) and the rear ones (2) (red arrows).

When reassembling, restore the connections.

If the clamp securing the wiring to the motor breaks, replace it with a new one.

Tighten the screws at a torque of 5 Nm.



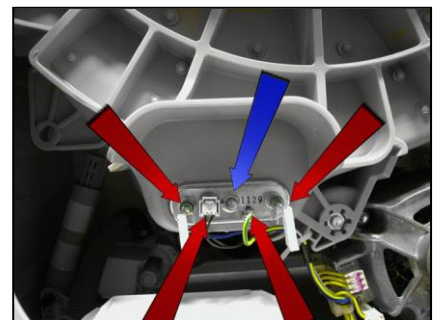
14.6.5 Resistance

Remove the back panel (see relevant chapter).

Disconnect the connectors of the heating element (1), NTC probe (2) and earth (3) red arrows.

Unscrew the nut (blue arrow) and remove the heating element from its seat.

Tighten the nut at a torque of 4 Nm.



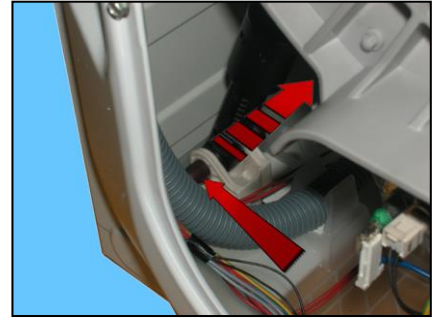
14.6.6 Rear shock absorber

Remove the back panel (see relevant chapter).

To take the pins out of their seats, push the locking tooth and at the same time remove it with pliers.

Perform the same operations for the other pin.

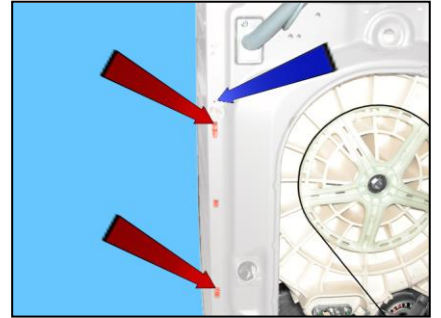
Take the shock absorber out.



14.6.7 Drain pipe/cabling support

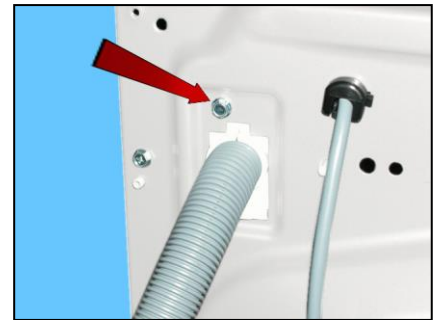
When fixing the drain pipe/cabling support make sure that the two stops (indicated by the red arrows) fit into their housings, locking the support to the unit.

If the fixing is not stable and there is a risk of it coming out of its position, fasten the support to the unit with a screw (3.5x6.5 mm) screwed into the hole indicated by the blue arrow.

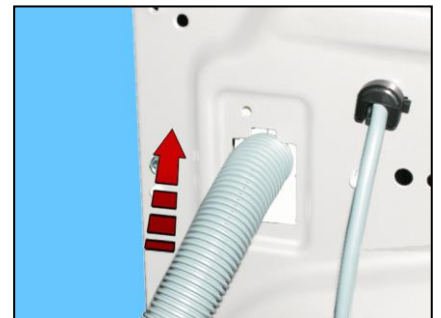


14.6.8 Drain pipe fastener

Loosen the screw that secures it to the cabinet

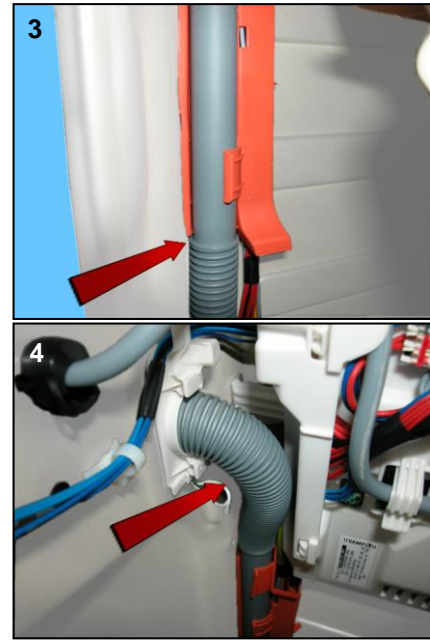
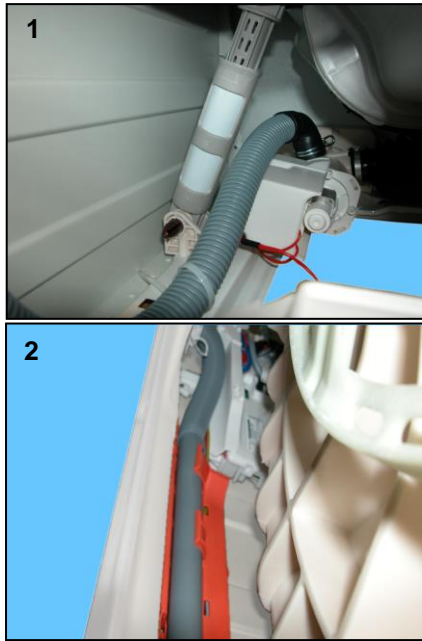


Push it towards the inside while lifting it



14.6.9 Main drain pipe

Arrange the drain pipe as shown in the figures.



14.6.10 Power supply cable clamp

Squeeze it with a pair of pliers while at the same time pulling it out of the cabinet



Revision	Date	Description	Author	Approved by:
00	07/2013	Document creation	DMM	XX – 0X/201X
01	03/2015	Updates for EWX14931: <ul style="list-style-type: none">- Alarm Table Summary- Diagram- EWX14931 Main board Accessibility	MP	XX – 0X/201X