

# DISHWASHER SERVICE MANUAL



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- Repairs to electrical appliances must be effected by qualified personnel only.
- Before accessing internal components, remove the plug from the power socket.

# Technical Features

Capacity .....	12 place settings
Height .....	845 mm
Height (without worktop) .....	815 mm
Width .....	596 mm
Depth .....	598 mm
Net Weight .....	46 kg
Electricity input .....	220-240 V, 50 Hz
Total Power .....	2200 W
Heating Power .....	2000 W
Pump Power .....	100 W
Drain Pump Power .....	30 W
Water supply pressure.....	0.03 MPa (0,3 bar) - 1 MPa (10 bar)
Current .....	10 A

# Security Systems

- **Flowmeter:**

The amount of water intake is in precise control.

- **Heater safety protection:**

In case of lack of water, with the help of a pressure switch, the resistance is prevented from being in operation. So both the resistance and the machine itself are protected.

- **Overflow and Leakage Protection:**

The dishwasher enters overflow mode when there is too much water in the dishwasher, the excess water gets drained. (a floater rises upwards and senses when overflow water gets there)

It also detects leaks in the base of the dishwasher, shuts down operation and automatically pumps out water before contact with floor.

Resettable overflow

# Electrical Components

## Button ( On / Off Switch )

Button is assembled in the control panel unit.

**On / Off** ( two pole )

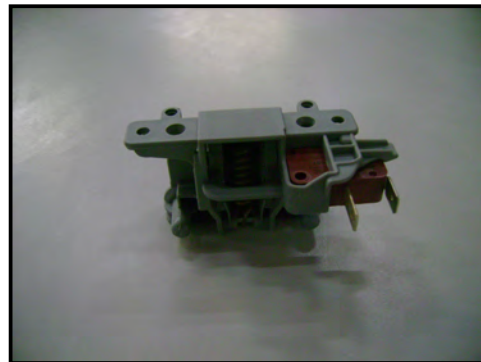
Voltage	250 V
Current	16 ( 4 ) A



## Door Lock

It is a mechanical lock/release system that is closing the door, supplying the connection of electrical parts in the machine and cutting off the connection.

Current	16 (4) A
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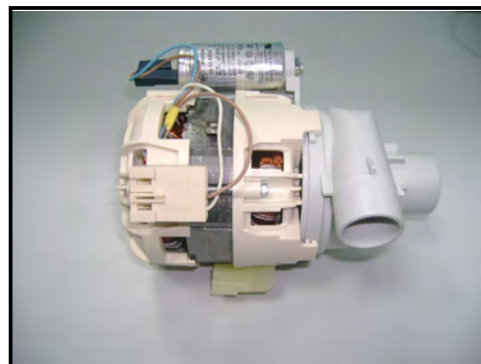
## Circulation Pump

Voltage	220/240 V
Frequency	50 Hz
Total Power	88 W
Coil Isolation Class	F
Main(First) Coil $\Omega$	95% $\pm$ 7 $\Omega$
Sub(second) Coil $\Omega$	126% $\pm$ 7 $\Omega$
Thermal Protector	109 $^{\circ}$ C
Pump Outlet Pressure	300 mbar
Pump Flowrate	60 lt/min

*Single direction, single phase, asynchronous and two pole.*

*It turns opposite clock direction.*

*It is assembled to the basement with rubber hangers.*



## Capacitor

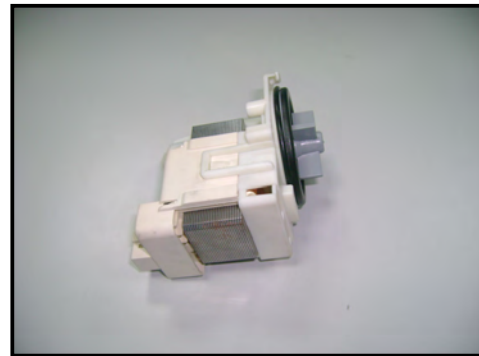
2,5  $\mu$  F – 450 V class P2

Capacitor is permanently connected to the circulation pump coils.



## Drain Pump

Voltage	220/240 Volt
Frequency	50 Hz
Total Power	30 W
Flowrate	17 – 21 lt/min
Coil Resistance	143 $\Omega$ $\pm$ 7
Coil Isolation Class	F
Thermal Protection	120 °C

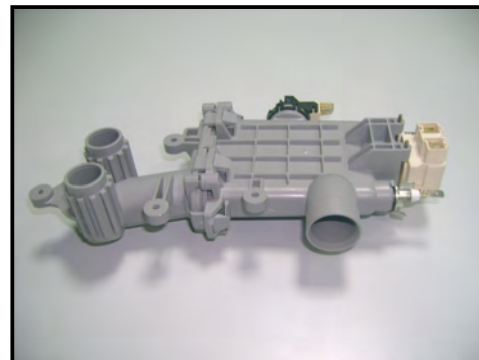


## Heater Casing Group

- **Heater**

Voltage	220/240 V
Total Power	2000 W
Resistance	23.19 $\Omega$ $\pm$ 5

It is used to heat the washing water.  
Heater is not active during the drying process.  
It is assembled to the sump and located to the Supply side of circulation pump.

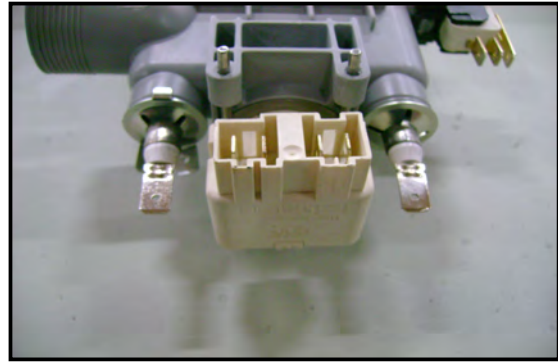


**NTC with Thermal Protector**

Thermal Protection 83±3 °C  
Temperatures

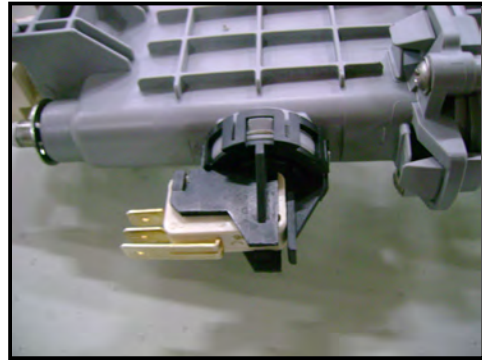
25°	5000Ω	%±5.0
35°	3300Ω	%±5.5
55°	1520Ω	%±6.5
63°	1174Ω	%±7.5
80°	670Ω	%±8.0
90°	488Ω	%±8.5

NTC is assembled on the heater Casing Group.



- **Pressure Switch**

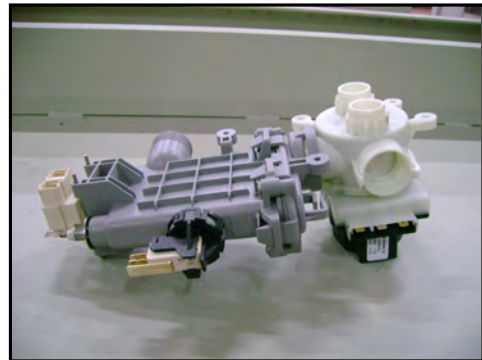
Voltage 220/240 V  
Frequency 50 Hz  
16 A – 3 Pins



- **Diverter**

There is diverter at C31 and C41 models  
It is assembled to the heater Casing Group.

Voltage 220/240 V  
Frequency 50 Hz  
Power 8 W  
Resistance 6840±75 Ω



2 Washing Position

1.Position	Upper spray arm complete
2.Position	Lower spray arm complete



### **Water Inlet Valve**

*Single inlet and single outlet standard single coil selenoid valve.*

Voltage	220/240 Volt
Frequency	50-60 Hz
Total Power	6 W
Flowrate	2.5 lt/min
Coil Isolation Class	F
Resistance	$3750 \pm 10 \Omega$ ( 20 C° )

*It is assembled to the basement and connect to the airbreak by hose.*



### **Regeneration Valve**

Voltage	220/240 V
Frequency	50/60 Hz
Total Power	6 W
Resistance	$4130 \pm 10 \Omega$ ( 25 C° )

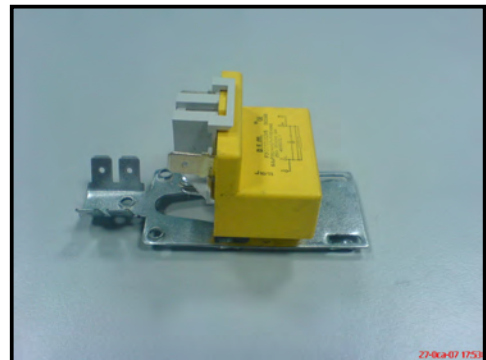
Regeneration valve is assembled on the water softener.



### **Parasite Filter**

Voltage	220/240 V
Frequency	50/60 Hz
0,1 uF (X1) + 2x0,027uF(Y2) + 1M $\Omega$	

It is used to prevent parasites from the main supply. It has been assembled to basement.



### **Turbo Fan Motor**

There is a thermal protector. Shaded pole motor , two pole temperature is between -40–150 C° .

There is Turbo Fan Motor only at C4 models.



### **Salt Sensor**

Voltage                    250 V  
Currency                 50 mA

It is assembled to the water softener.  
It warns if the salt is less than requested quantity.



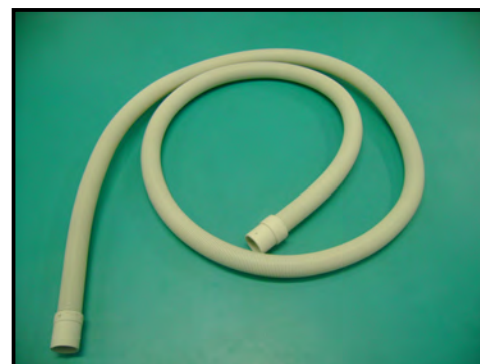
### **Power Cord**

Type                    Euro 3'lü 1 mm<sup>2</sup> , copper conducting  
Isolation               TS 9760 H05VV-F  
Plug                    TS-IEC 60884-1 PVC injected  
Length                 1800 mm



### **Drain Hose**

Drain hose maximum height            110cm  
Drain hose minimum height            50cm  
Drain hose maximum length            400cm



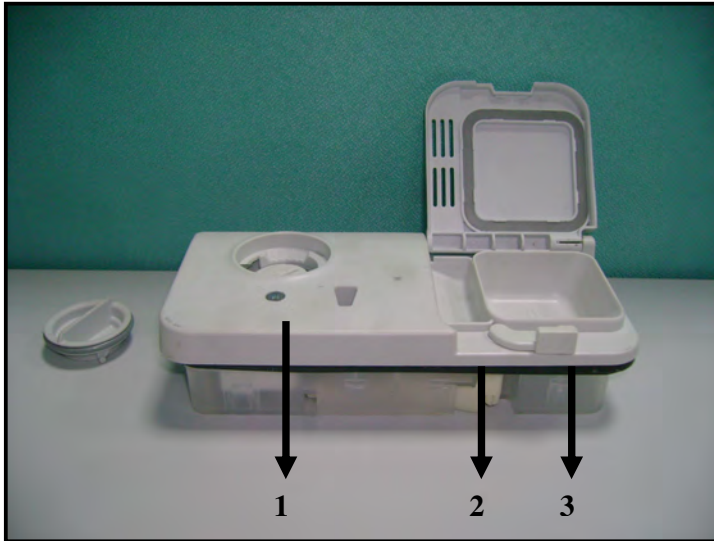
Total Power                                15 W  
Voltage                                        220/240 V  
Frequency                                    50 Hz.  
Resistance                                  238.6± ٪ 5 Ω

Coil isolation class:                        H



## **Detergent / Rinse Aid Dispenser**

Detergant dispenser consists of rinse aid and detergent compartment. It has been assembled to the inner door by the snap fits. Only one bobbin has been used for operating the system.



### ***Detergant compartment***

Main wash compartment (3)                      40 cm<sup>3</sup>  
 Prewash compartment (2)                      5 cm<sup>3</sup>

***Rinse aid compartment (1) :***  
 Dosage Quantities:

Level	Rinse aid dosage amount
Level 1	1 cc ± 0,5 cc
Level 2	2 cc ± 0,5 cc
Level 3	3 cc ± 20%
Level 4	4 cc ± 20%
Level 5	5 cc ± 20%
Level 6	6 cc ± 20%


Rinse aid compartment: 150 cm<sup>3</sup>  
 Factory outlet setting position: level 3

### ***Water Softener***

Resin Quantity                                      0,6lt  
 Capacity of salt compartment                2kg  
 Total hardness adjustment level            6

Water Level	Hardness	German Hardness °dH	French hardness °dF	Bristish hardness °dE	Water Liter
Level 1		0-5	0-9	0-6	-
Level 2		6-11	10-20	7-14	160lt
Level 3		12-17	21-30	15-21	89lt
Level 4		18-22	31-40	22-28	59lt
Level 5		23-31	41-55	29-39	46lt
Level 6		32-50	56-90	40-63	16lt

# Energy Label

<b>Energy</b>	Dishwasher
Manufacturer	<b>LOGO</b>
Model	<b>XXXXXX</b>
More efficient	
Less efficient	
Energy Consumption kWh / cycle (Based on test results for manufacturer's standard cycle using cold fill)	<b>X.XX</b>
Actual consumption will depend on how the appliance is used.	
Cleaning Performance A: higher G: lower	<b>A</b> B C D E F G
Drying Performance A: higher G: lower	<b>A</b> B C D E F G
Standard Place Settings Water Consumption l / cycle	XX XX
Noise (dB (A) re 1 pW)	
Further information is contained in product brochures. Norm EN 50242	

## ENERGY LABEL

LOGO :XXXXXX  
MODEL:XXXXXX

## ENERGY PERFORMANCE

A

## ENERGY CONSUMPTION

A ---- 1,05 kWh / cycle  
B ---- 1,20 kWh / cycle

## WASHING PERFORMANCE

A,B

## DRYING PERFORMANCE

A,B

## CAPACITY

Standard place settings 12  
persons

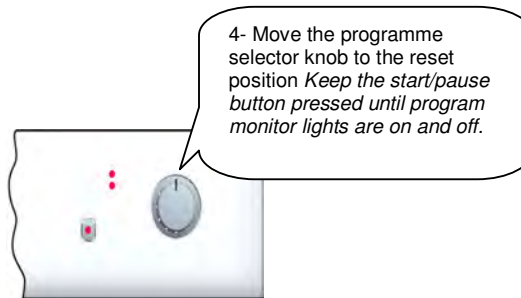
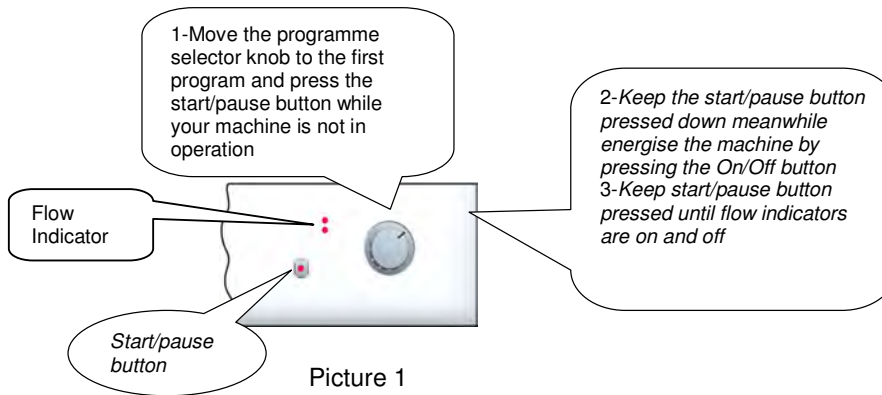
## WATER CONSUMPTION

13 – 15 lt



# Service Mode :

## Starting the service test



After finalizing the above processes; the service program starts automatically.

Program algorithm steps follow each other automatically. In case of a problem; the program stops on






STEP	PROCESS	TIME	CONTROL
0	Show the last failure occurred before	~6 sec	At the beginning of service program
1	Drain	~4 sec	Drain pump is running
2	Fill (~3,5lt)	~1min 25 sec	Water inlet valve and flowmeter is controlled. (At 2,5lt circulation pump starts to run)
3	wash	~1min 10 sec	Circulation pump – detergent dispenser
4	Wash + Heating	~5 min	Heater Casing (pressure switch)- NTC- diverter positions
5	Regeneration	~1 min	Regeneration valve
6	Drain	~20 sec	Drain Pump
7	End led highlight		

the problem step and show failure code. You can understand the problem by looking the failure code.

# Failure Codes : C1 Models

ERROR CODE			ERROR DESCRIPTION	POSSIBLE PROBLEMS
Wash	End	Start /Pause		
		☀	Inadequate water supply	<ul style="list-style-type: none"> <li>• Make sure the water input tap is totally open and that there is no water cut.</li> <li>• Close the water input tap, separate the water input hose from the tap and clean the filter at the connection end of the hose.</li> <li>• Water inlet valve filter can be</li> <li>• Water inlet valve can be out of order</li> <li>• There can be a problem with the cable connection of water inlet valve.</li> <li>• Floater switch can be out of order or have a problem with the cable connection.</li> <li>• Pressure switch of the heater casing group can have a mechanical or cable connection problem.</li> <li>•</li> <li>• Circulation pump can be out of order or have a problem with the cable connection.</li> <li>• Electronic card can be out of order.</li> </ul>
	☀		Error of continuous water input	<ul style="list-style-type: none"> <li>• Water inlet valve can be out of order or can not be closed.</li> <li>• Electronic card can be out of order.</li> </ul>
	☀	☀	The waste water in the machine cannot be discharged.	<ul style="list-style-type: none"> <li>• Water outlet hose is clogged.</li> <li>• Water discharge hose can be out of order.</li> <li>• There can be a problem with cable connection of the drain pump.</li> <li>• Pressure switch of the heater casing group can have a mechanical or cable connection problem.</li> <li>• Electronic card can be out of order.</li> </ul>
☀		☀	Intended water temperature could not be reached/ faulty heater and/or heater sensor	<ul style="list-style-type: none"> <li>• NTC can be out of order.</li> <li>• Faulty NTC cable connection can be faulty. NTCshort or open circuit.</li> <li>• Thermal protection can be out of order.</li> <li>• Heater can be out of order or cable connection can be out order.</li> </ul>
☀	☀		Alarm is active against water overflow	<ul style="list-style-type: none"> <li>• There can be a water leakage from the tub.</li> <li>• Floater switch can be out of order or have a problem with the cable connection.</li> <li>• Electronic card can be out of order.</li> </ul>
☀	☀	☀	Electronic card parameter faulty	<ul style="list-style-type: none"> <li>• By the Immediate and continuous voltage decreases software variants can not be kept in the memory of electronic card.</li> </ul>
☀			Faulty Flowmeter	<ul style="list-style-type: none"> <li>• Cable connection of flowmeter can be faulty.</li> <li>• Electronic card can be out of order.</li> </ul>
		☀	Door is open	<ul style="list-style-type: none"> <li>• Door lock mechanism can be out order.</li> <li>• There can be o problem with the cable connection of door lock.</li> <li>• Electronic card can be out of order.</li> </ul>

## Failure Codes: C2 – C3 – C4 Models

ERROR CODE						ERROR DESCRIPTION	CONTROL
DISPLAY	WASH	RINSE	DRY	END	START/PAUSE		
F5						Inadequate water supply	<ul style="list-style-type: none"> <li>• Make sure the water input tap is totally open and that there is no water cut.</li> <li>• Close the water input tap, separate the water input hose from the tap and clean the filter at the connection end of the hose.</li> <li>• .Water inlet valve filter can be</li> <li>• Water inlet valve can be out of order</li> <li>• There can be a problem with the cable connection of water inlet valve.</li> <li>• Floater switch can be out of order or have a problem with the cable connection.</li> <li>• Pressure switch of the heater casing group can have a mechanical or cable connection problem.</li> <li>• Circulation pump can be out of order or have a problem with the cable connection.</li> <li>• Electronic card can be out of order.</li> </ul>
F3						Error of continuous water input	<ul style="list-style-type: none"> <li>• Water inlet valve can be out of order or can not be closed.</li> <li>• Electronic card can be out of order.</li> </ul>
F2						The waste water in the machine cannot be discharged.	<ul style="list-style-type: none"> <li>• Water outlet hose is clogged.</li> <li>• Water discharge hose can be out of order.</li> <li>• There can be a problem with cable connection of the drain pump.</li> <li>• Pressure switch of the heater casing group can have a mechanical or cable connection problem.</li> <li>• Electronic card can be out of order.</li> </ul>

ERROR CODE						ERROR DESCRIPTION	CONTROL
DISPLAY	WASH	RINSE	DRY	END	START/PAUSE		
F8	☀		☀	☀		Heater Error: Inadequate heat	<ul style="list-style-type: none"> <li>• NTC can be out of order.</li> <li>• Faulty NTC cable connection can be faulty. NTC short or open circuit.</li> <li>• Thermal protection can be out of order.</li> <li>• Heater can be out of order or cable connection can be out of order.</li> </ul>
			☀			Alarm is active against water overflow	<ul style="list-style-type: none"> <li>• Floater switch can be out of order or have a problem with the cable connection.</li> <li>• Electronic card can be out of order.</li> </ul>
F1		☀	☀			Alarm is active against water leakage	<ul style="list-style-type: none"> <li>• There can be a water leakage from the tub.</li> <li>• Floater switch can be out of order or have a problem with the cable connection.</li> <li>• Electronic card can be out of order.</li> </ul>
F7	☀		☀			Exceed heating problem (water inside the machine is too high)	<ul style="list-style-type: none"> <li>• water inside the machine is &gt;77°C, NTC can be out of order.</li> <li>• Electronic card can be out of order.</li> <li>•</li> </ul>
F9	☀	☀				Diverter position problem	<ul style="list-style-type: none"> <li>• Diverter electric contacts can have open circuit</li> <li>• Cable connection of the diverter can be faulty</li> <li>• Electronic card can be out of order.</li> </ul>

ERROR CODE						ERROR DESCRIPTION	CONTROL
DISPLAY	WASH	RINSE	DRY	END	START/PAUSE		
F6	☀			☀		NTC faulty	<ul style="list-style-type: none"> <li>• NTC can be out of order.</li> <li>• Faulty NTC cable connection can be faulty. NTC short or open circuit.</li> <li>• Electronic card can be out of order.</li> </ul>
FE	☀	☀	☀	☀		Electronic card parameter faulty	<ul style="list-style-type: none"> <li>• By the Immediate and continuous voltage decreases software variants can not be kept in the memory of electronic card</li> </ul>
SE	☀	☀	☀			Electronic card water hardness faulty	<ul style="list-style-type: none"> <li>• Water Hardness is not be adjusted or Water Hardness adjustment can not be kept in the electronic card memory.</li> <li>• Water Hardness should be adjusted by controlling the supply water.</li> </ul>
F4		☀				Faulty Flowmeter	<ul style="list-style-type: none"> <li>• Cable connection of flowmeter can be faulty.</li> <li>• Electronic card can be out of order.</li> </ul>
FA	☀	☀		☀		Faulty turbidity sensor	<ul style="list-style-type: none"> <li>• Kirlilik sensörü kablo bağlantısı hatalı</li> <li>• Turbidity sensor can be out of order.</li> <li>• There can be some soil around the turbidity sensor.</li> <li>• Electronic card can be out of order.</li> </ul>
					☀	Door is open	<ul style="list-style-type: none"> <li>• Door lock mechanism can be out order.</li> <li>• There can be a problem with the cable connection of door lock.</li> <li>• Electronic card can be out of order.</li> </ul>



## ADJUSTING THE WATER HARDNESS

**First of all be sure that the machine isn't in operation**

1- Move the programme selector knob to the 0 (Reset) position while your machine is not in operation.



2- After this operation press the Start/Pause button and keep it pressed down



3- Meanwhile, energise the machine by pressing the Power On/Off button



4- Keep the start/pause button pressed until the flow indicators are on and off. It takes ~5"



- Your machine displays the latest entered water hardness setting.

Water hardness can be adjusted by pressing start/pause button according to Table of Water Hardness Level Settings.

- After adjusting the water hardness level , press on/off button to save settings in memory.

## Model : C1

Water hardness level	German hardness dH	French hardness dF	British hardness dE	Hardness Level Indicator
1	0-5	0-9	0-6	<input checked="" type="radio"/> Wash lamp is on. <input type="radio"/> End lamp is off. <input type="radio"/> The Start/Pause lamp is off.
2	6-11	10-20	7-14	<input type="radio"/> Wash lamp is off. <input checked="" type="radio"/> End lamp is on. <input type="radio"/> The Start/Pause lamp is off.
3	12-17	21-30	15-21	<input type="radio"/> Wash lamp is off. <input type="radio"/> End lamp is off. <input checked="" type="radio"/> The Start/Pause lamp is on.
4	18-22	31-40	22-28	<input checked="" type="radio"/> Wash lamp is on. <input checked="" type="radio"/> End lamp is on. <input type="radio"/> The Start/Pause lamp is off.
5	23-31	41-55	29-39	<input checked="" type="radio"/> Wash lamp is on. <input type="radio"/> End lamp is off. <input checked="" type="radio"/> The Start/Pause lamp is on.
6	32-50	56-90	40-63	<input type="radio"/> Wash lamp is off. <input checked="" type="radio"/> End lamp is on. <input checked="" type="radio"/> The Start/Pause lamp is on.

## Models C2 – C3

Water Hardness Level	German Hardness dH	French Hardness dF	British Hardness dE	Water Hardness Level Indicator
1	0-5	0-9	0-6	Wash light (3h) is open.
2	6-11	10-20	7-14	Rinse light (6h) is open.
3	12-17	21-30	15-21	Dry light (9h) is open.
4	18-22	31-40	22-28	End light (12h) is open.
5	23-31	41-55	29-39	Wash and end light (3h+12h) is open.
6	32-50	56-90	40-63	Rinse and end light (6h+12h) is open.

## Model C4



Water hardness can be adjusted by pressing “+” and “-“ on display. **3**  
according to Table of Water Hardness Level Settings.

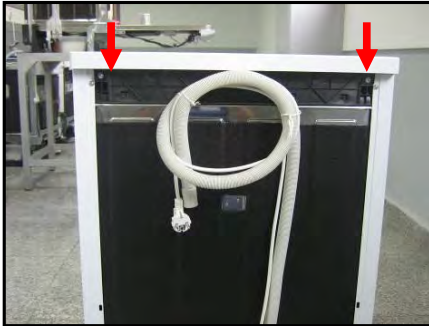
Water hardness level	German hardness dH	French hardness dF	British hardness dE	Hardness Level Indicator
1	0-5	0-9	0-6	L1 is seen on display.
2	6-11	10-20	7-14	L2 is seen on display.
3	12-17	21-30	15-21	L3 is seen on display.
4	18-22	31-40	22-28	L4 is seen on display.
5	23-31	41-55	29-39	L5 is seen on display.
6	32-50	56-90	40-63	L6 is seen on display.

## DISASSEMBLY

### 1 ) ACCESSIBILITY

#### 1.1) Top Plate

- a) Remove two screws that fix the top plate at the back.

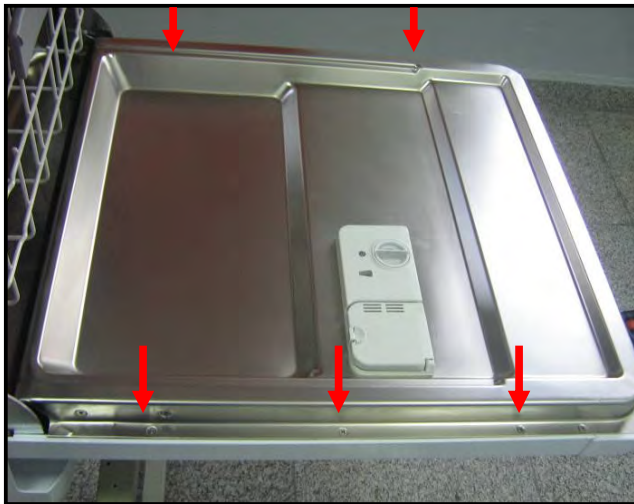


- b) Push the top-plate back and pull it up.



## 1.2) Front Panel

a) Remove six screws that fix the .front panel.



b).Pull down the front panel as it shown in the Picture.



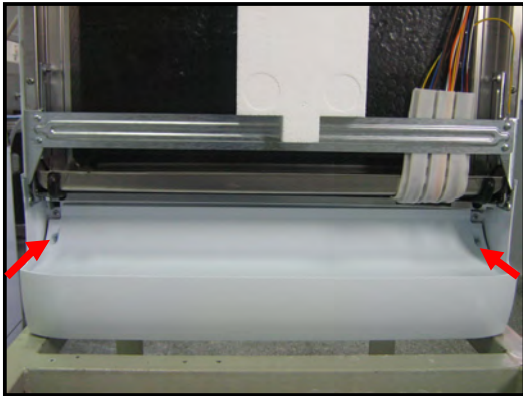
Front panel

Remove six screws that fix the front panel.

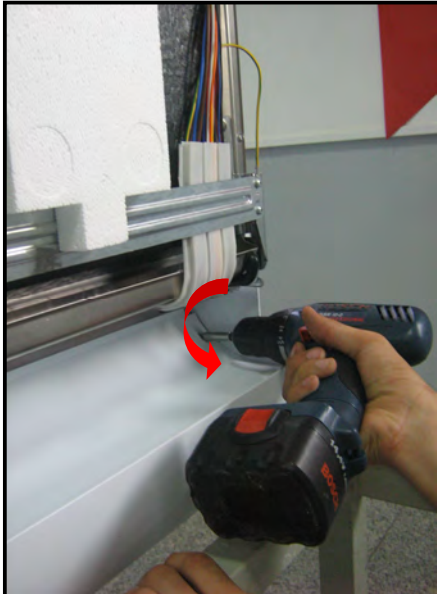


### 1.3 ) Plastic Kick plate

a) Remove two screws fixing plastic kick plate.



b) Remove the plastic kick plate as it is shown in the picture.



### 1.4 ) Side panels

Before removing side panels ;

a) Firstly remove the top plate. ( see1.1 )

b) Than remove plastic kick plate. (see1.3 )

While removing side panels ;

a) Remove six screws that fix side panels at the back.



b) Remove four screw covers carefully as it shown in the Picture.



b) Remove six screws which are in front of the machine.





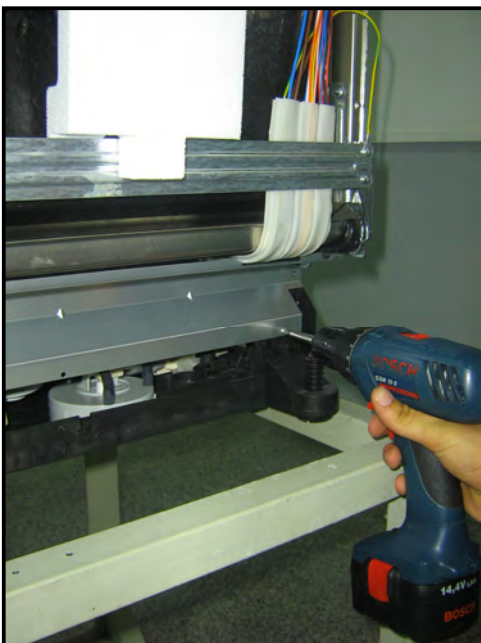
c) To remove the side panel , remove the upper plastic hinge and than the above one and pull it up.



### 1.5 ) Kick Plate Sheet Iron

a) Remove top plate, plastic kick plate and side panels. ( see 1.1 ,1.3 , 1.4 )

b) Remove two screws tat fix the kick plate sheet iron.

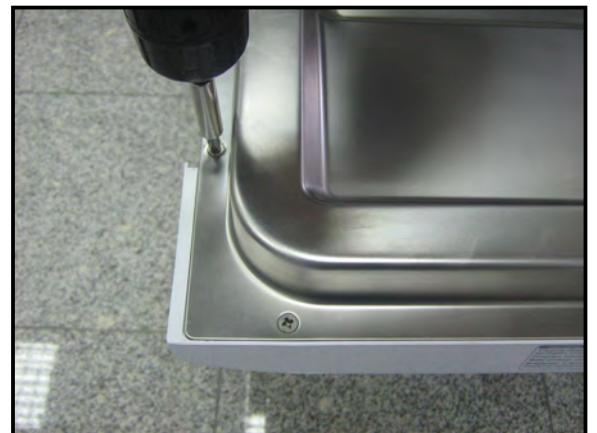
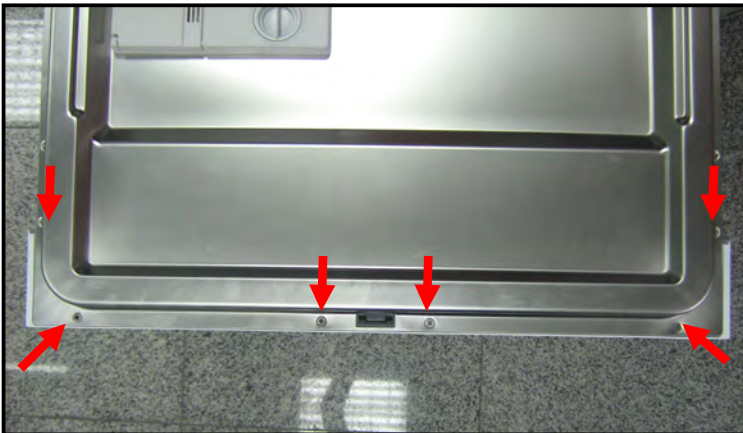


c) pull it down as shown in the picture.



## 1.6 ) Control Panel

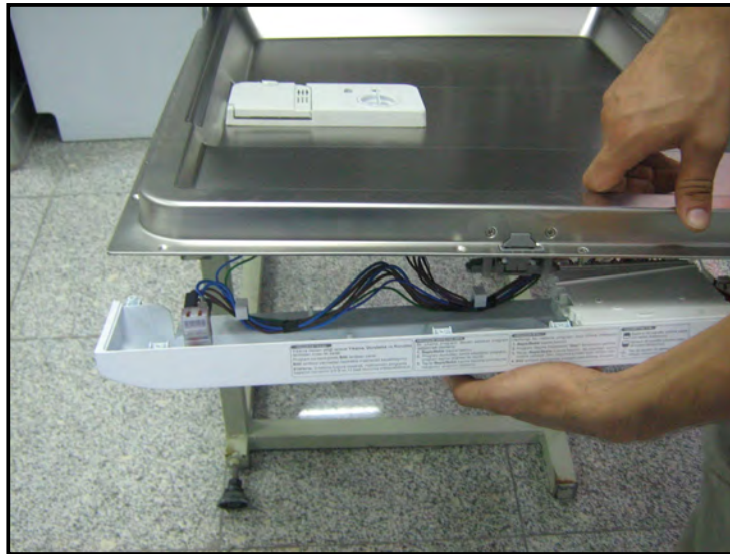
a) Remove six screws that fix control panel to the door inside sheet iron.



b) Remove the cable connection plastic which fix cable harness to the control panel as shown in the Picture.

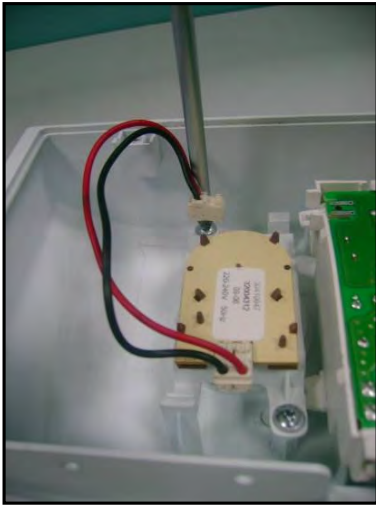


c) Remove the control panel group carefully as shown in the picture.



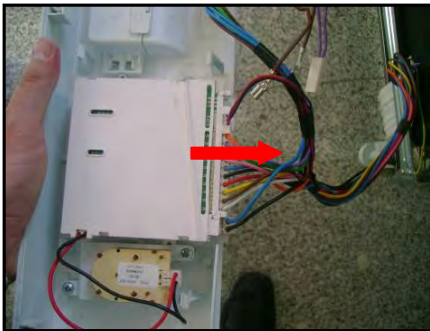
d) Remove the wires that are connected to control panel group.

### 1.6.1 ) Rotary Switch



- a) Remove the control panel.( see 1.6 )
- b)Remove the wire that is connected to the electronic card.
- c) Remove two screws fixing to the control panel group.

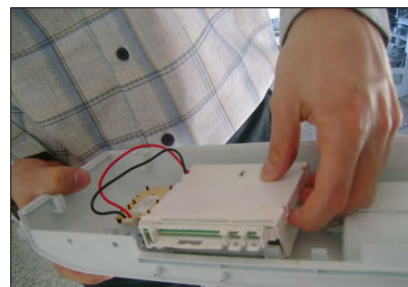
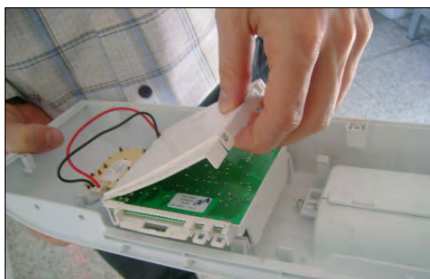
### 1.6.2 ) Electronic Card

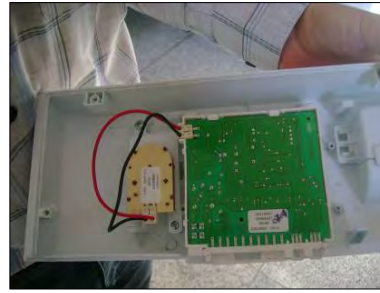


- a)Remove the wires that are shown in the picture. .

**WARNING:** while removing wires , do not pull them from wires , pull from connectors.

- b)Remove pcb box cover with pulling its plastic hinges.





c) Remove the wire which is between rotary switch and electronic card.

d) Remove the electronic card from pcb box by removing pcb box's plastic hinges.



### 1.6.3 Display Card ( Only for C4 models )



a) Remove the wire that is between display card and electronic card.

b) Remove display card from display card box's hinge carefully.

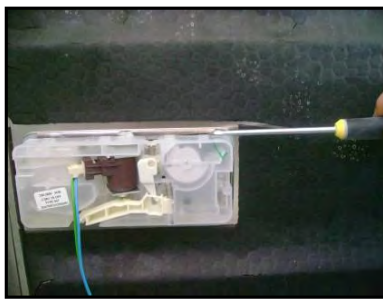


### 1.7 )Door Lock Group



- a) Remove control panel group. ( see 1.6)
- b) Remove two screws that fix the door lock group.

### 1.8 ) Dispanser

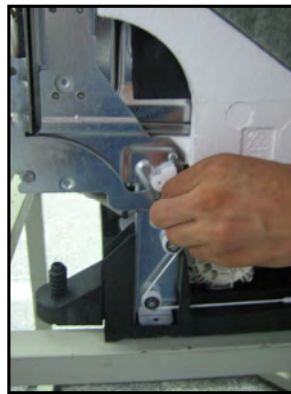
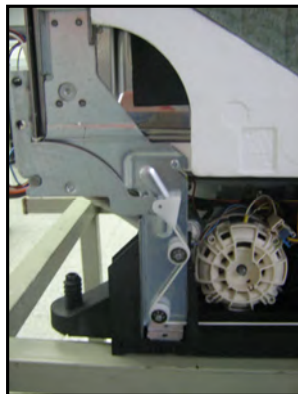


- a) Remove the front panel ( see 1.2 )
- b) Remove the wire.
- c) Remove dispenser from inside door's hinges by using slotted screwdriver.
- d) Push and remove the dispenser .

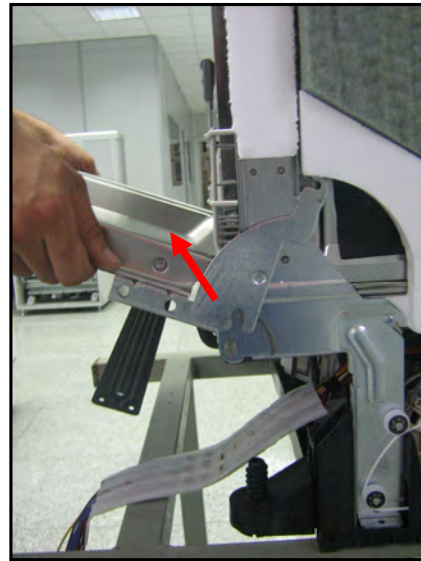
**Warning :** use work glovers otherwise inside door iron sheet can cut your hands.

### 1.9 ) Door Inside

- a) Remove side panels. (see 1.4 )



b) Remove hinge spring from hinge cord group as it is shown in the picture.



d) Pull the door inside up as it is shown in the picture..

e) remove two screws that fix hinge movement sheet iron to the door inside.





## THE INNER COMPONENTS

### 2. ) To Access The Components From Sides



a)Right Sight



b)Left Sight

### 2.1 Steam Condenser ( only in the models that have active or turbo drying systems )



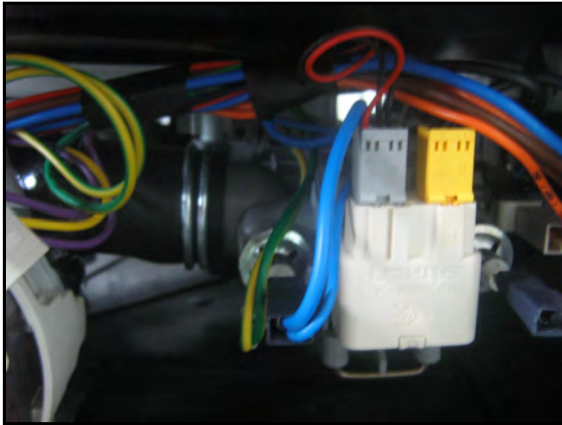
a)Remove right panel.

b)Open the door , and remove steam condenser's nut.

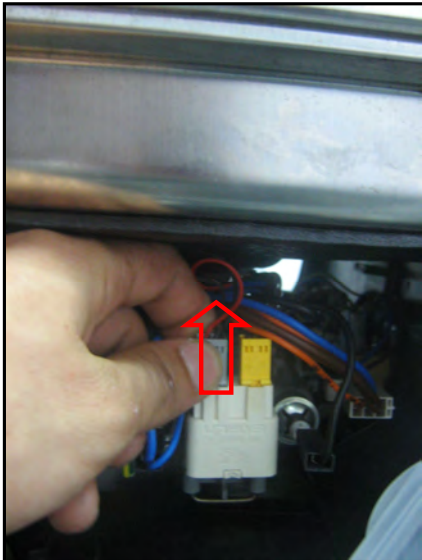
c) Pull steam condenser.



## 2.2 ) NTC with Thermal Protector

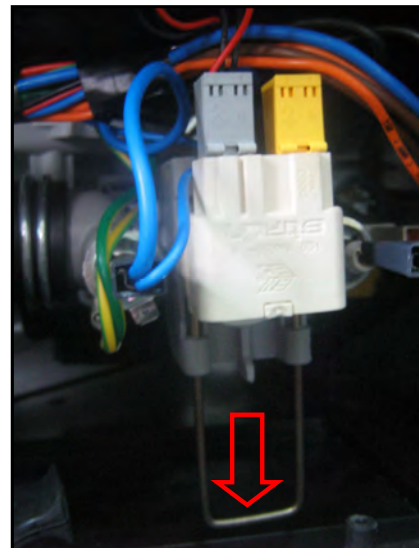
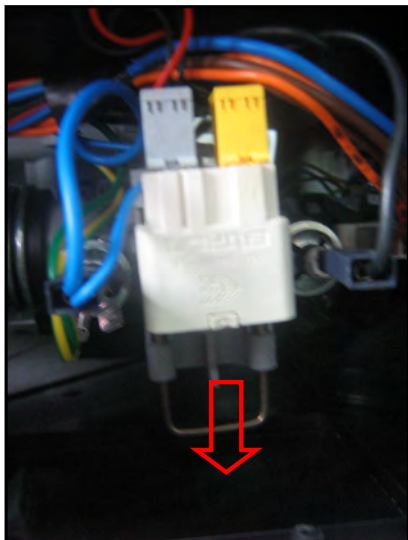


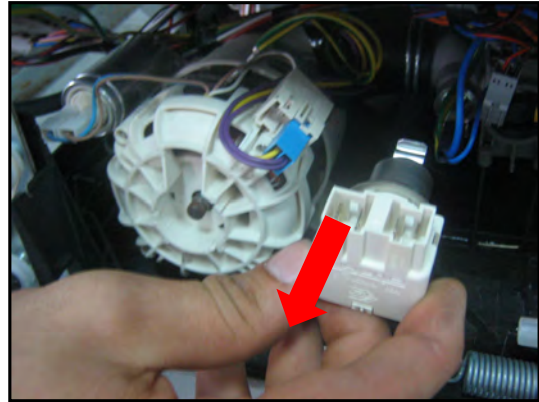
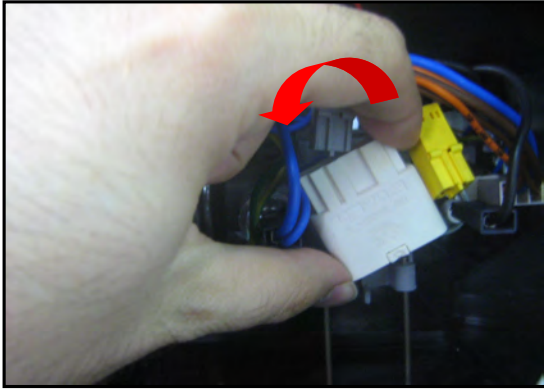
a) Remove right side panel.(see 1.4)



b) Remove the wires as it is shown in the Picture.

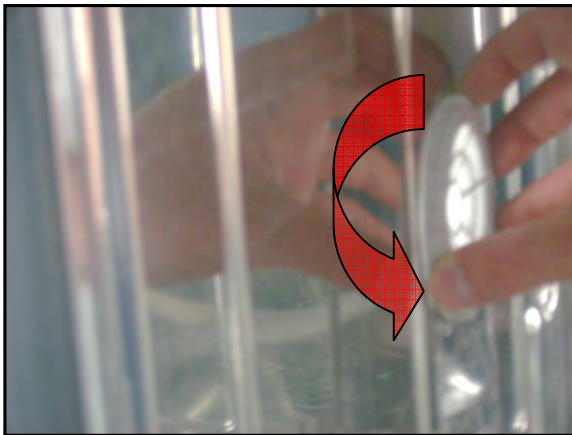
c) Pull the pim down as it is shown in the picture.





d) Remove the NTC as it is shown in the picture.

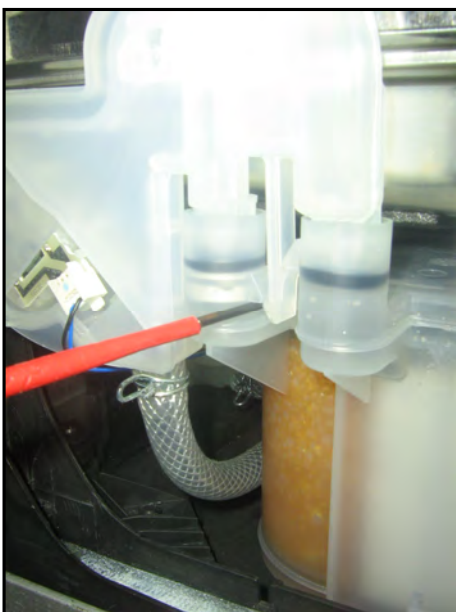
### 2.3 ) Air-Break



a) Remove the left side panel of the machine.. (see 1.4 )

b) open machine's door..

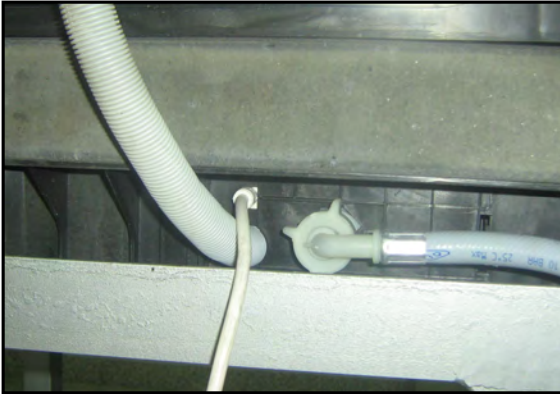
c) Rotate counterclockwise air-break nut and remove it.



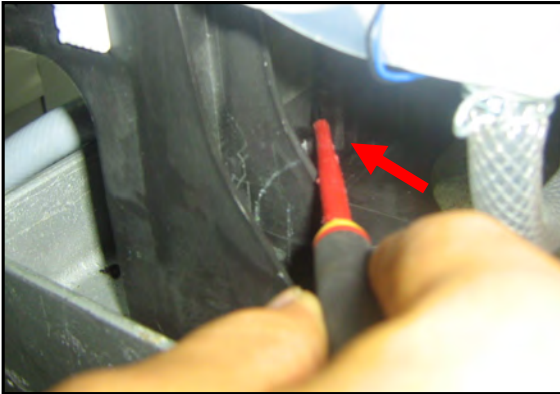
d) Remove air -break's connections with salt cap as it is shown in the picture.( be careful about plastic hinges )



## 2.4 ) Hose Connection Plastic



a ) Remove left side panel. ( see 1.4 )



b)By using flat tip screwdriver remove hose connection plastic's hinge from the basement as it shown in the picture.



c)push the hose connection plastic.

**Warning :** If you do not obey instructions while disassembly of the hose connection plastic it can be broken.

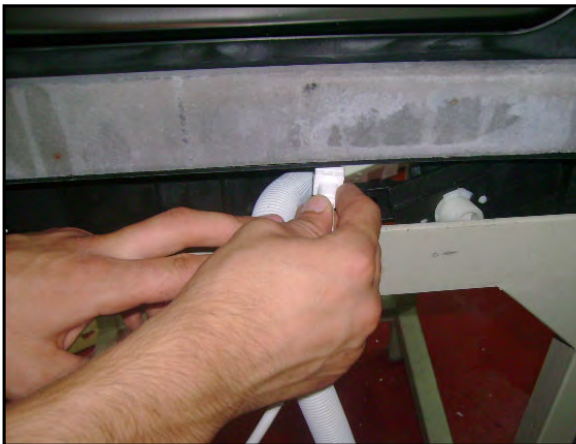
## 2.5 ) Power Cord

a ) Remove hose connection plastic.( see 2.3 )



e) Remove the lower cover.(see )

f) Remove the wires that is between power cord and parasite filter.



e ) Remove the power cord..

### 3. To Access The Components From In Front Of The Machine



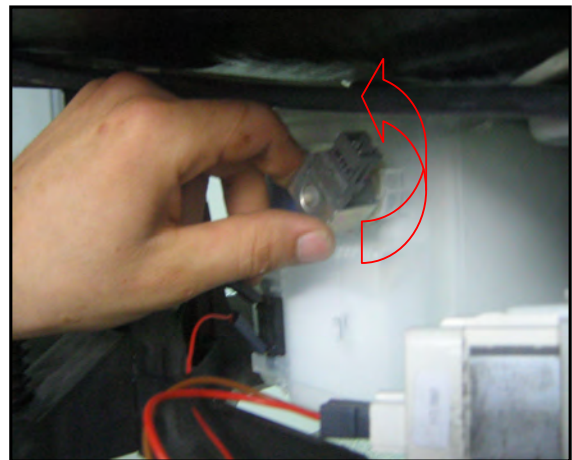
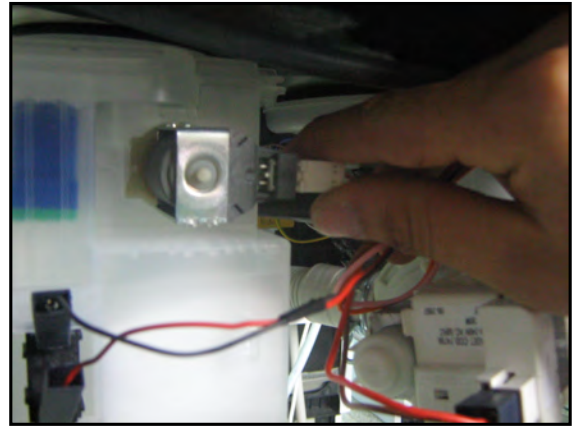
a) Remove Plastic kick plate and .kick plate iron sheet.(see 1.3 – 1.5 )

#### 3.1 ) Regeneration Valve

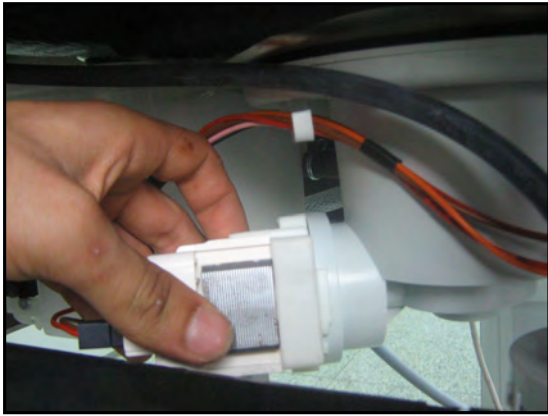
a) Remove Plastic kick plate and .kick plate iron sheet.(see 1.3 – 1.5 )

b) Remove the wires..

c) To remove regeneration Valve rotate counterclockwise and pull it as it is shown in the picture.



### 3.2) Drain Pump



a) Remove Plastic kick plate and .kick plate iron sheet.(see 1.3 – 1.5 )

b) Remove the wires..

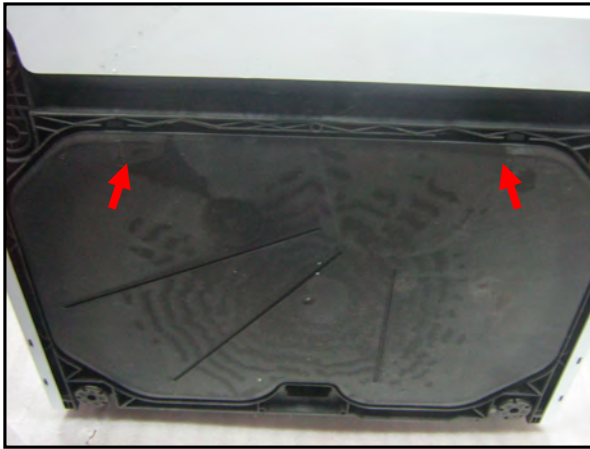
c) To remove the drain pump that fixes to the sump, rotate it in the direction of counterclockwise and pull .

#### 4.To Access The Components from the Lower Cover

a) Lay the appliance on the rear panel.



b) Remove lower cover from the places that are shown in the picture.

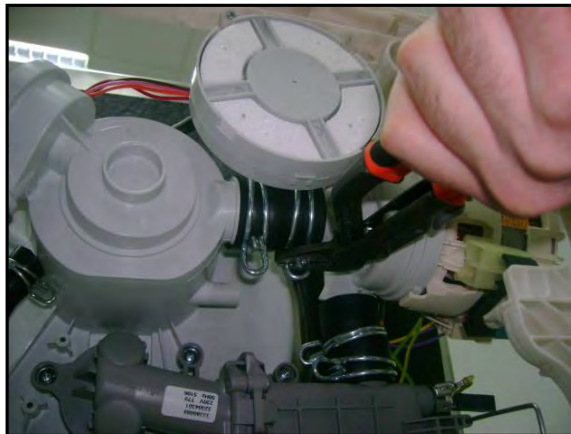
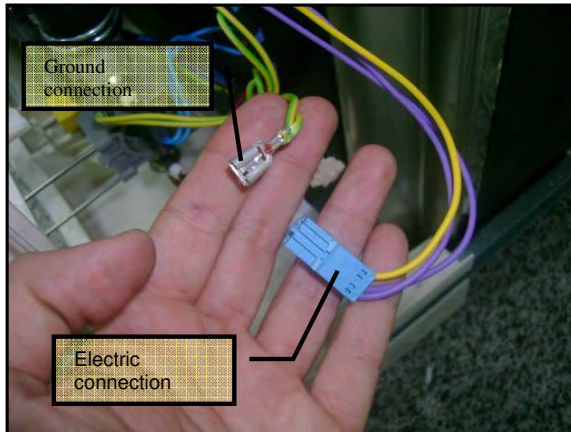


Torn  
resm  
kısım



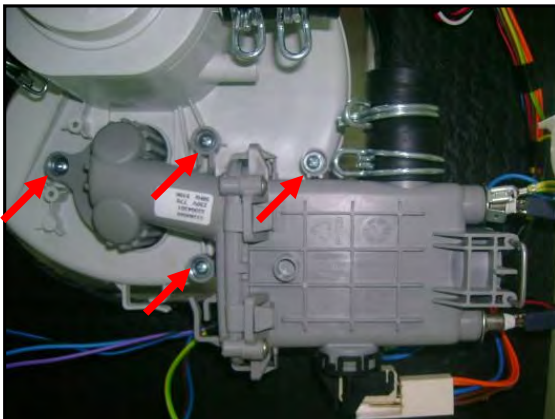
## 4.1 ) Circulation Pump

a) Lay the appliance on the rear panel. (see 4 )

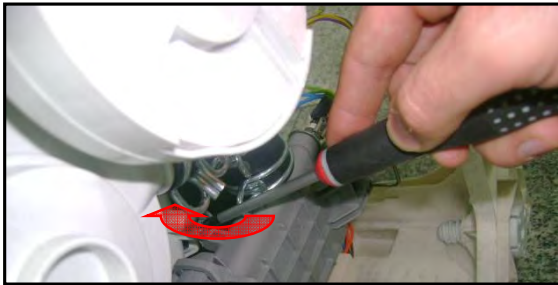


c) Remove two clamps that are shown in the Picture . ( Heater casing – circulation pump , sump – Circulation pump )

## 4.2 ) Heater (Heater-Casing Group without diverter ) ( for C1 – C2 models )



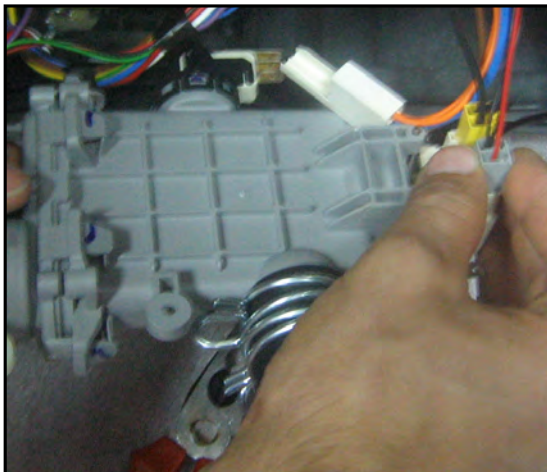
a) Remove the machine's lower cover.



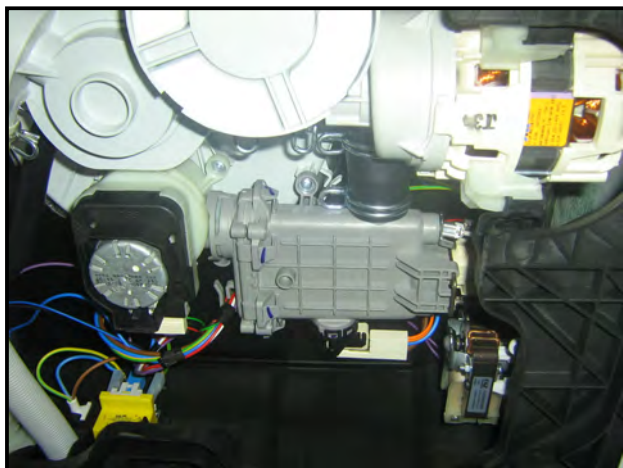
b) Remove four screws that fix heater to the sump.

c) Remove clamp that are shown in the Picture . ( Heater casing – circulation pump , )

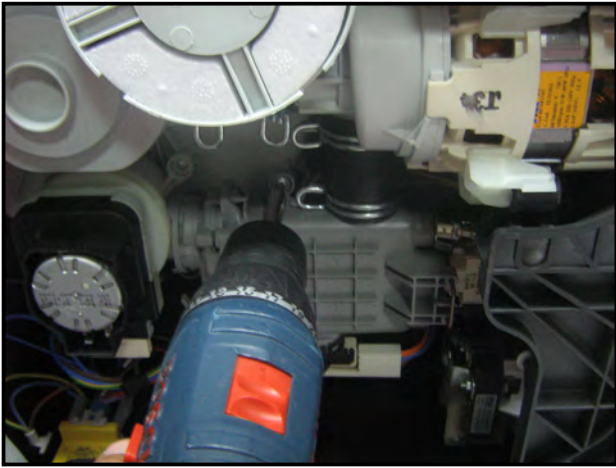
c) Remove the wires that are shown in the picture.



#### 4.2 ) Heater (Heater-Casing Group with diverter ) ( for C3 – C4 models )

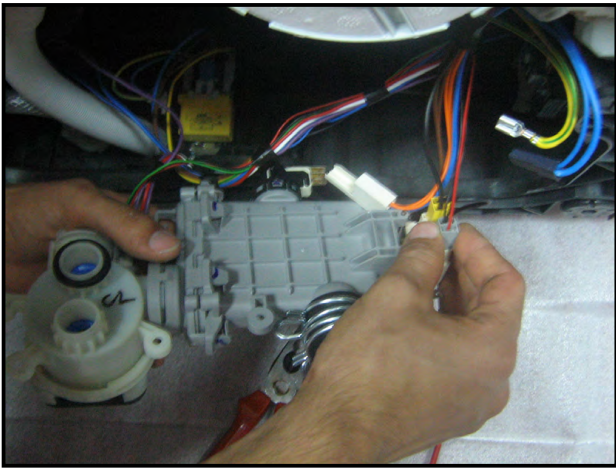


a) Remove the machine's lower cower.

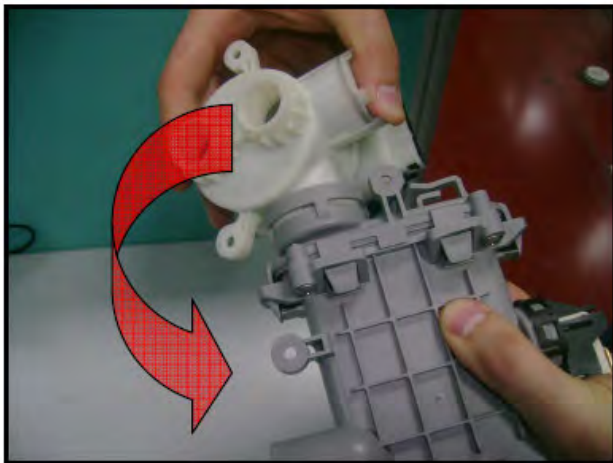


b) Remove five screws that fix heater to the sump.

c) Remove clamp that are shown in the Picture . (Heater casing – circulation pump)



d) Remove the wires that are shown in the picture.

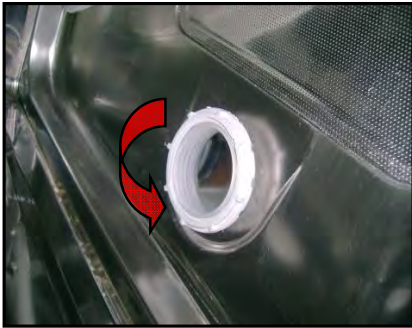


e) Detach diverter as it is shown in the picture.

### 4.3 )Water Softener



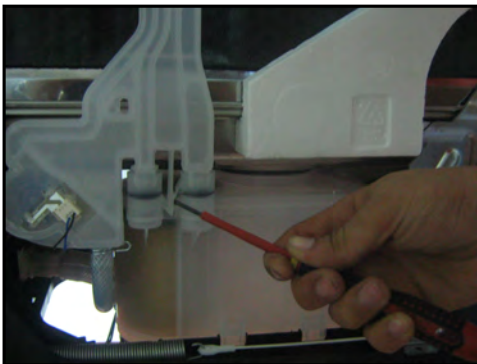
a) To remove salt cup cover, rotate it in the direction of counterclockwise. .



b) To remove salt cup nut , rotate it in the direction of counterclockwise .

c) Remove left side panel (see 1.4)

d) detach the connections which are between water softener and air-break.

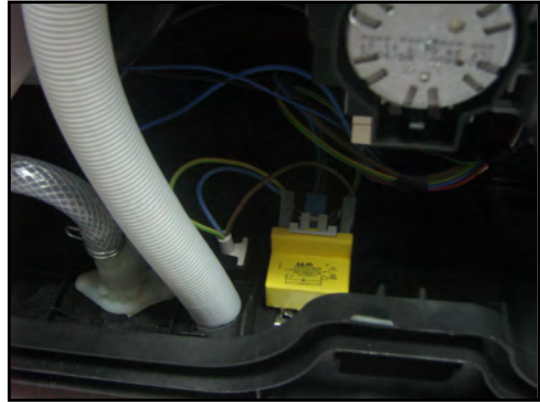


e) Remove lower cover.

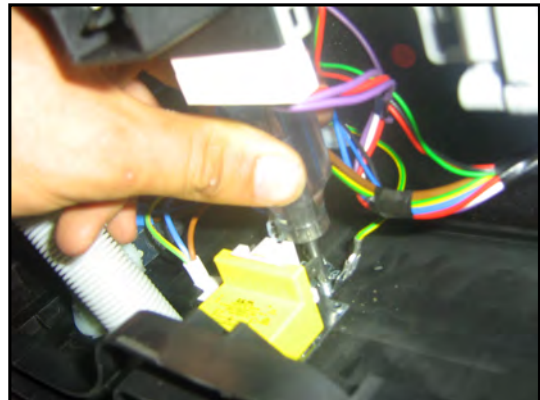
f) Remove the hose that is between sump and salt camp.

#### 4.4) Parasite Filtler

a) Remove lower cover.



b) Remove one screw fixing parasite filter.



b) Remove wires..

c) Push parasite filter as shown in the picture..

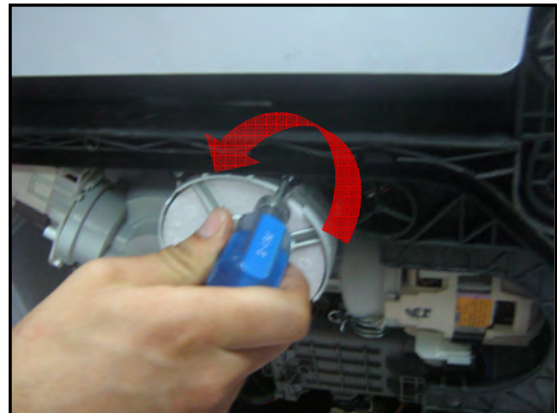


#### 4.5 ) Floater

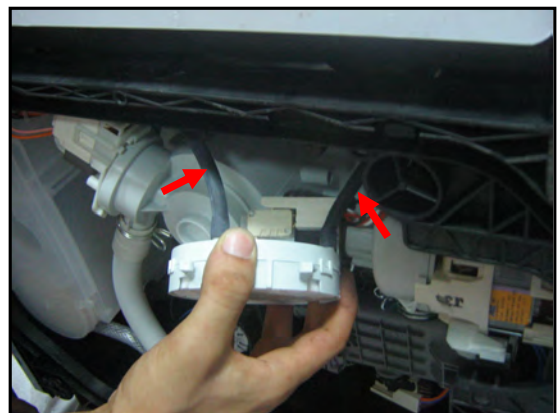
a) Remove lower cover. (see 6 )



b) Remove two screws that fix floater as it is shown in the picture.



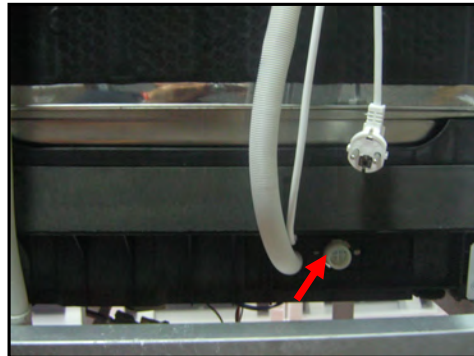
b)remove the two floater hoses .



c)Remove the wire that is connected to the floater.

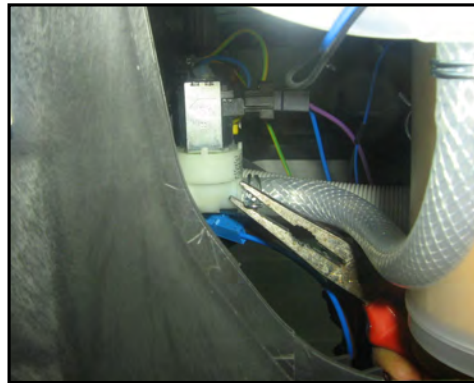
#### 4.6 ) Water Inlet valve

a) Remove lower cover.( see 6 )

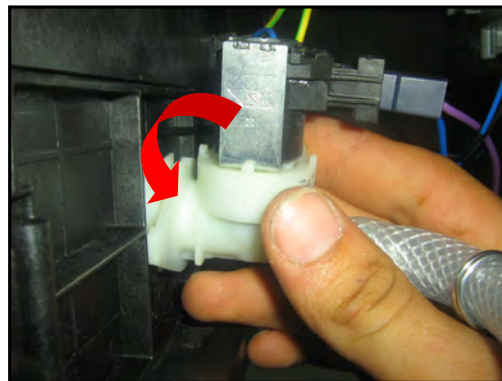


b) Remove the wire that is connected to the water inlet valve.

c) Remove the clamp that connects water inlet valve and air –break as it is shown in the picture.



c) To remove water inlet valve pull it back as it is shown in the direction of Picture then release water inlet valve from the pins that is connected to . and rotate it in the direction of counterclockwise.



#### 4.7 ) Draining Hose

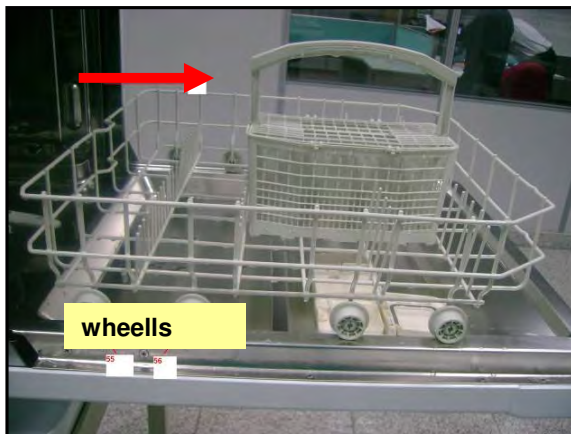


- a) Remove the hose connection plastic.. ( see 4.4 )
- b) Remove lower cover. ( see 6 )
- c) Remove the clamp that fixes draining hose to the sump.
- d) Remove draining hose.



## 5 ) Basket Group

### 5.1 ) Lower Basket



a) Open machine's door.

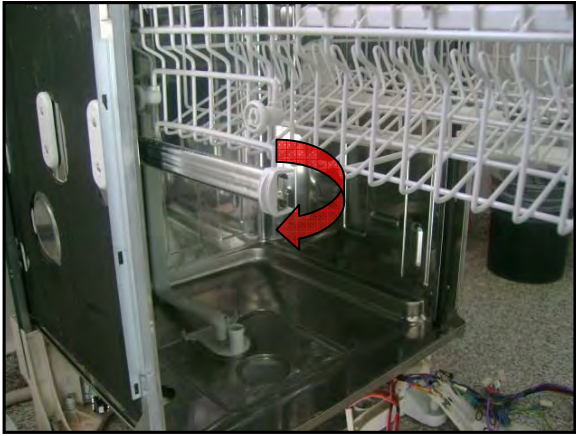
b) Pull the basket to yourself.

### 5.2) Upper Basket



a) Open machine's door.

b) Pull the basket to yourself.

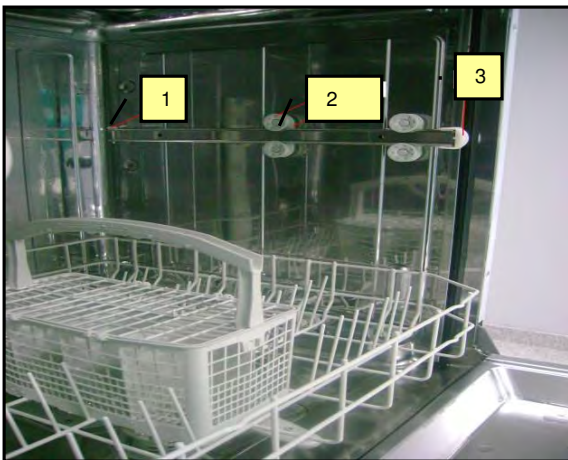


c) Open Upper basket rail lock front.

d) Pull the basket to yourself and remove it.



### 5.3) Basket Rails



- 1- Upper basket rail stoper rear
- 2- Upper basket wheels
- 3- Upper basket rail lock front

## 6. ) The Components That Are Inside the Tub

### 6.1 ) Course , Micro and metal filters

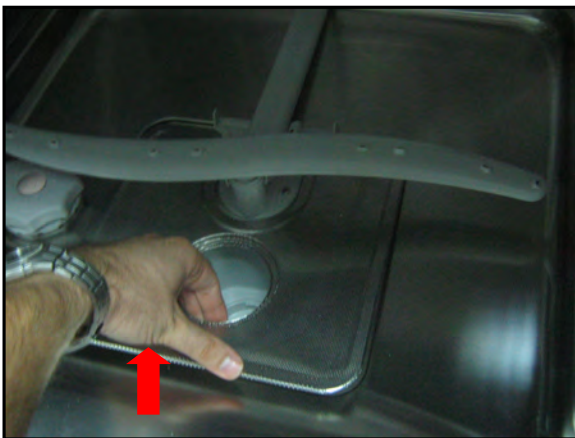
a)Open the door.

b)Remove lower basket.

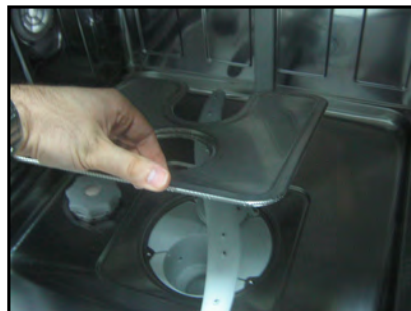
c) to remove microfilter group rotate them in the direction of counterclockwise and pull them up as it is shown in the Picture.



d)To remove microfilter group ( course filter and micro filter ) pull them as it is shown in the picture.

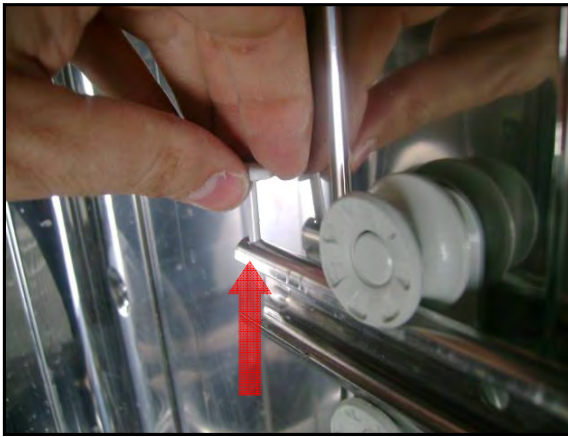


e)to remove the metal filter pull it up as it is shown in the picture.





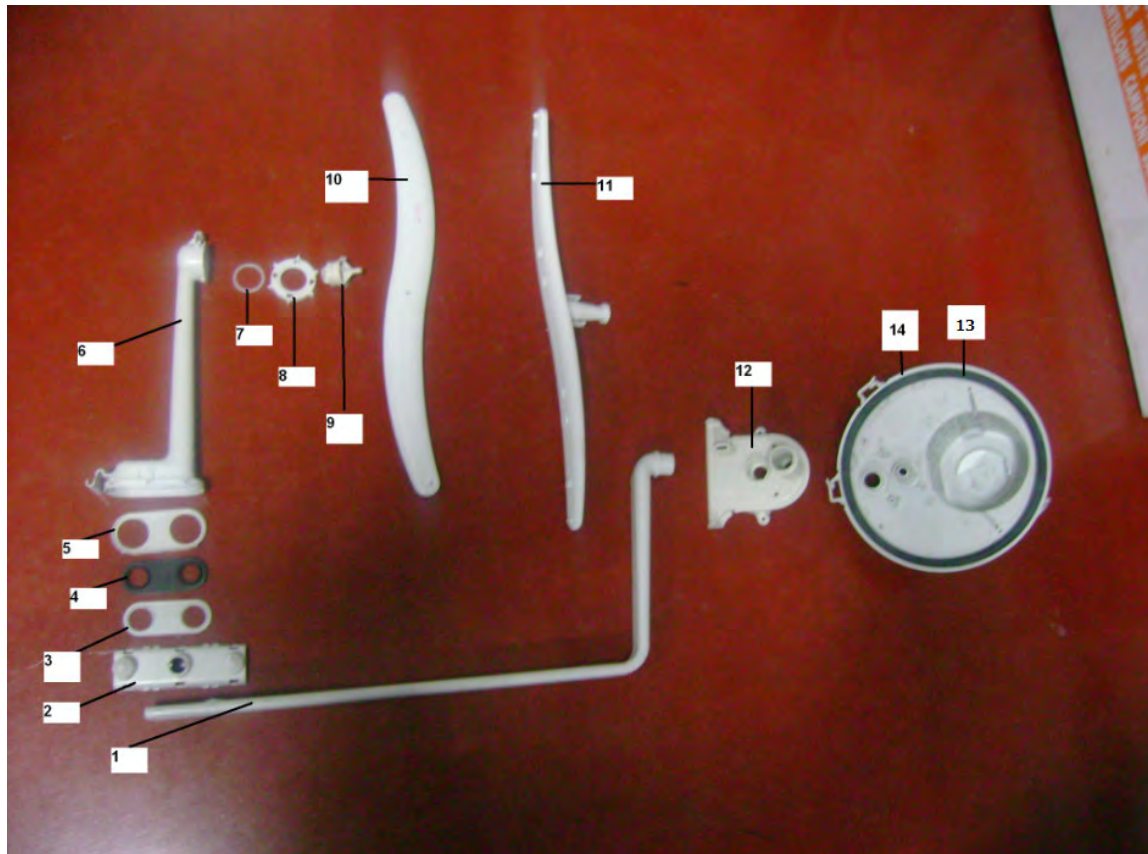
a) To remove the basket rails, open the door and take out baskets.



b) To remove basket rails release the rail from upper basket stopper rear.



## 6.2 ) Spray Arm System



- 1 Upper spray arm feeding canal
- 2 Upper spray arm adjustment link
- 3 Upper spray arm adaptor flange
- 4 Upper spray arm adaptor gasket
- 5 Upper spray arm adaptor cover
- 6 Upper spray arm
- 7 Upper spray arm nut plastic
- 8 Upper spray arm nut
- 9 Upper spray arm shaft
- 10 Upper spray arm
- 11 Lower spray arm
- 12 Spray arm support
- 13 Sump seal
- 14 Sump



a)After removing the lower basket , pull the spray arm upwards .gripping it by the central hub.



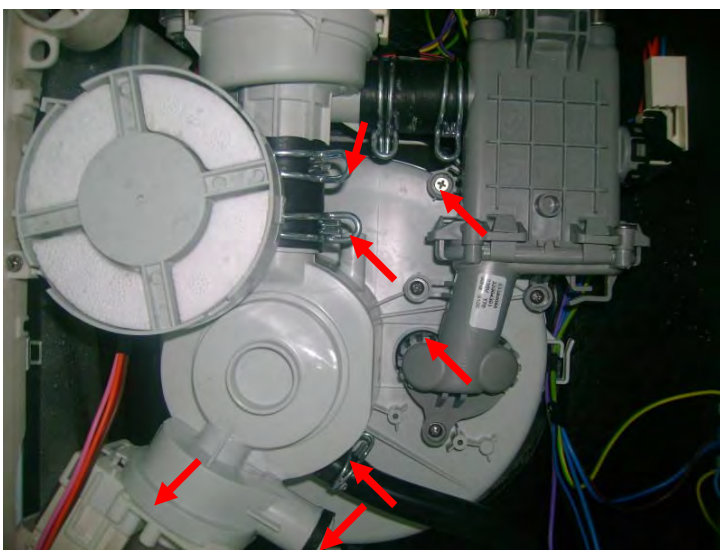
b)to remove upper spray arm adjustment link pull it trough yourself as it is shown in the picture.



c) to remove upper spray feeding canal turn left it than pull it up as it is shown in the picture.

### 6.3 ) Sump

- a) Remove any residual water from the sump by suction so that it does not flow into the tub and the pressure switch tubes , then lay the appliance on the rear panel.
- b) Remove lower cover. ( see 6 )
- c) From inside tub ,remove the basket and lower spray arm .
- d) Remove the microfilter group and metal filter .
- c) detach all the hoses (sump – draining hose , circulation pump – sump, sump – water softener)



f)Remove the four screws that secure the tumb to the tub.

g) Remove the two screws which secure the spray arm support to the sump.

h) detach the drain pump and pull the sump out ,taking care not to damage the tub seal.

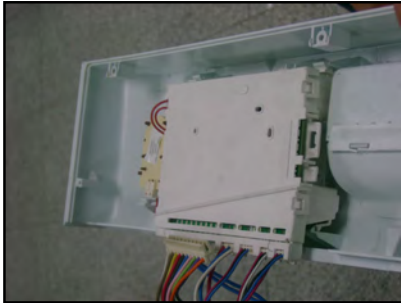
# REPAIR TECHNIQUES

## COMPONENTS AND RESISTANCE VALUES

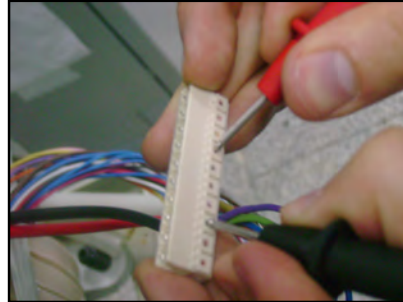
COMPONENTS	REAL VALUES	NOTES
ON / OFF BUTTON	0 Ω ON COMPONENT	ON/OFF BUTTON IS PRESSED
DOOR SWITCH (KAPI KİLIDI)	CN2.9 – CN2.2 0 Ω	DOOR IS CLOSE
PRESSURE SWITCH	CN2.10 – CN2.2 0 Ω ∞ Ω	FULL FILL WATER NO WATER
DRAIN PUMP	CN2.2 – CN2.4 143 Ω % ± 7	
WATER INLET VALVE	CN2.6 – CN 2.9 3750 Ω ± %10 (20C°)	
REGENERATION VALVE	CN2.10 – CN2.7 4130 Ω ± %10(25 C°)	
SALT SENSOR	CN5.1 – CN5.2 0 Ω WITHOUT SALT ∞ Ω WITH SALT	MEASURE JUST ON THE ELECTRONIC CARD
HEATER	23.95±15 Ω	MEASURE JUST ON THE COMPONENT
DETERGENT DISPENSER	1660 Ω ± %10 (25 C °)	MEASURE JUST ON THE COMPONENT
CIRCULATION PUMP	CN2.3 – CN2.9 95 ±%7 Ω 126 ±% 7 Ω	Primary winding Secondary winding (FROM THE COMPONENT)
SET NTC SENSOR	CN 3.2 25°- 5000Ω %±5.0 CN 3.1 35°- 3300Ω %±5.5 55°- 1520Ω %±6.5 63°- 1174Ω %±7.5 80°- 670Ω %±8.0 90°- 488Ω %±8.5	
FAN MOTOR	CN 2.6 – CN 2.9 238.6 ± % 5	
DIVERTER	CN 6.1 – CN 2.9 6840 ± % 5	
RINSE AID SENSOR	CN 5.3 – CN5.2 0 Ω ∞ Ω	RINSE AID OFF RINSE AID ON
FLOATER (MICROSWITCH )	CN2.1 – CN 2.5 0 Ω CN2.1 – CN 2.4 ∞ Ω	MICROSWITICH IS INACTIVE (NO WATER) MIKROSWITCH IS ACTIVE (THERE IS WATER )



# MEASURING THE COMPONENTS FROM THE ELECTRICAL CARD



a)



b)

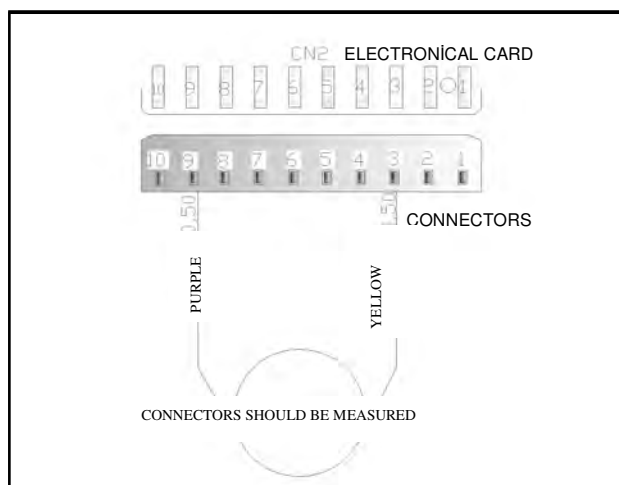
In order to reach the connections of the electronic card; dismantle the control panel (Picture a) and probes of the tester should be applied on to the related connectors of the electrical card; control the values according to the resistance value table. (picture b)

**Precaution :** Always remove the plug from the power socket before touching internal components.

## Washing pump:

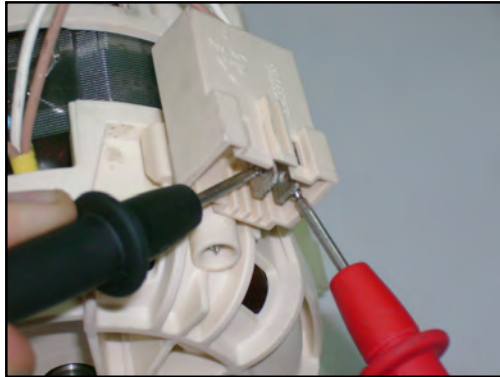
From the electrical card:

You can just measure the primary winding value from the electrical card.  
Resistance value of the primary winding must be **95  $\Omega$  on the connectors CN2.3 – CN2.9**

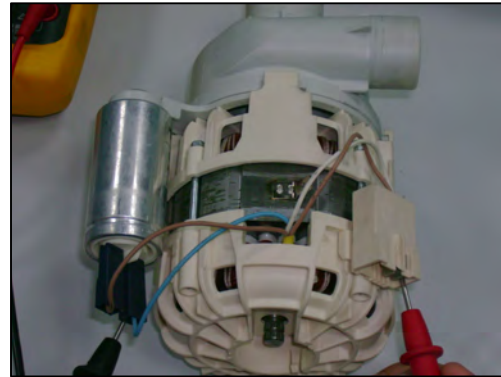


Above sketch show the connectors of the washing pump on the electrical card. Probes of the tester should be applied on to the related connectors.

From the component:



Measurement of the primary windings of the washing pump



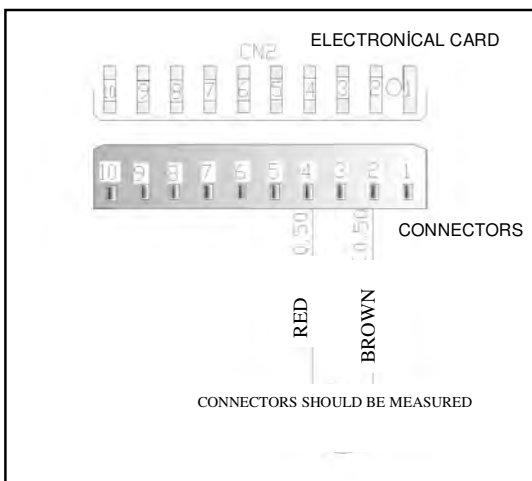
Measurement of the secondary windings of the washing pump (white cable – blue cable)

Probes of the tester should be applied on to the related connectors as shown on the pictures

### Drain Pump:

From the electrical card:

CN2.2 – CN2.4	143 $\Omega$ $\pm$ % 7
---------------	------------------------



Above sketch show the connectors of the drain pump on the electrical card. Probes of the tester should be applied on to the related connectors.

From the component :

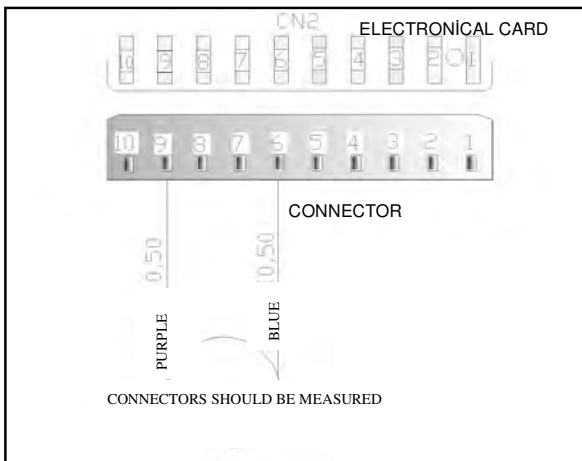


Probes of the tester should be applied on to the related connectors as shown on the pictures

**Water inlet valve:**

From the electrical card:

CN2.6 – CN 2.9	3750 $\Omega \pm 10$ ( 20 C <sup>o</sup> )
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Above sketch show the connectors of the water inlet valve on the electrical card. Probes of the tester should be applied on to the related connectors.

From the components :



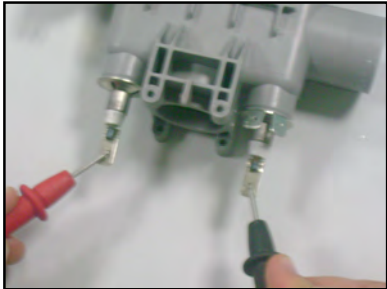
Probes of the tester should be applied on to the related connectors as shown on the pictures

### Heater Casing :

It can't be measured from the electrical card.

23.95±15 Ω

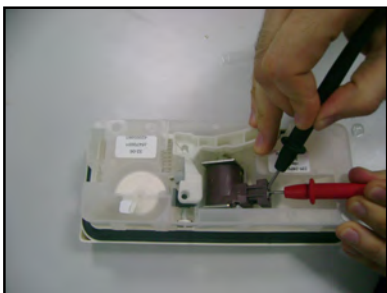
From the component:



Probes of the tester should be applied on to the related connectors as shown on the pictures

### Detergent dispenser :

It can't be measured from the electrical card.



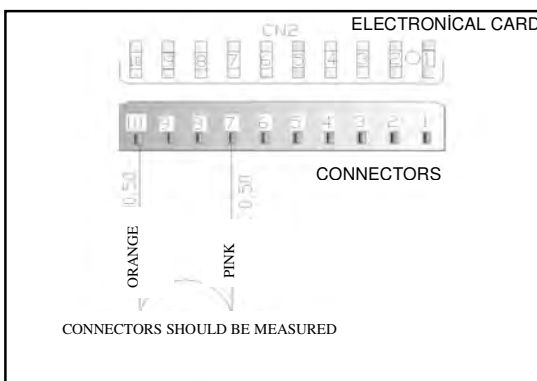
1660 Ω ± 10 (25 C °)

Probes of the tester should be applied on to the related connectors as shown on the pictures

### Regeneration valve:

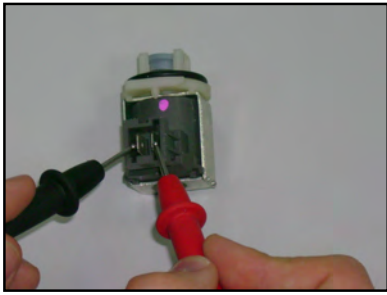
From the electrical card:

CN2.10 – CN2.7      4130 Ω ± 10 (25 C °)



Sketch at the side show the connectors of the regeneration valve on the electrical card. Probes of the tester should be applied on to the related connectors.

**From the component :**

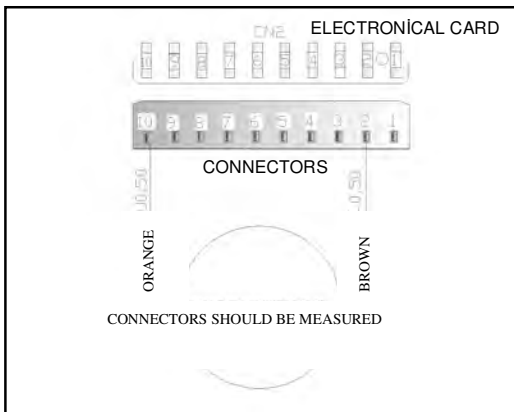


Probes of the tester should be applied on to the related connectors as shown on the pictures

***Pressure switch:***

From the electronical card:

<b>CN2.10 – CN2.2</b>	$\infty \Omega$ THERE IS WATER
	0 $\Omega$ THERE ISN'T WATER



Above sketch show the connectors of the pressure switch on the electronical card. Probes of the tester should be applied on to the related connectors.

***From the component:***

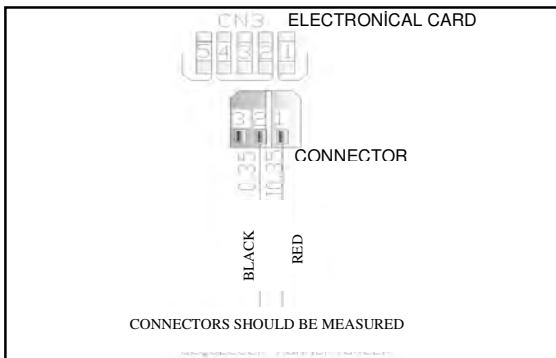


Probes of the tester should be applied on to the related connectors as shown on the pictures

## NTC SENSOR:

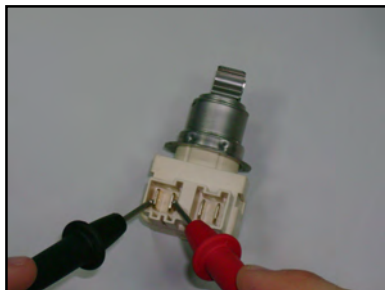
From the electrical card:

<b>CN 3.1 - CN 3.2</b>	25 °-5000Ω-±5.0
	35 °-3300Ω-±5.5
	55 °-1520Ω-±6.5
	63 °-1174Ω-±7.5
	80 °- 670Ω -±8.0
	90 °- 488Ω -±8.5



Above sketch show the connectors of NTC sensor on the electrical card. Probes of the tester should be applied on to the related connectors.

From the component:

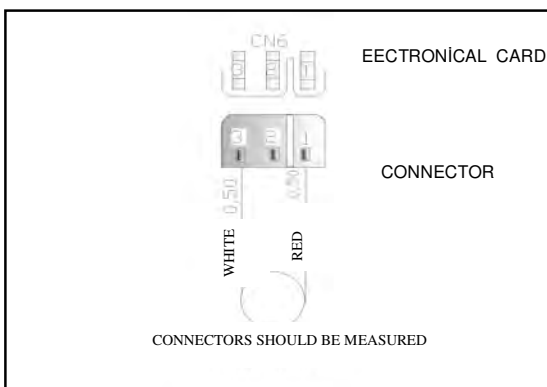


Probes of the tester should be applied on to the related connectors as shown on the pictures

## Diverter :

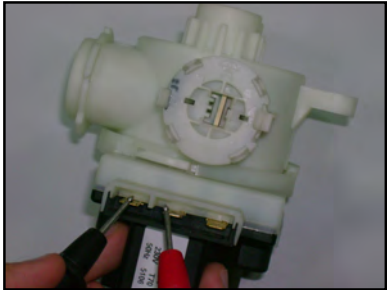
From the electrical card :

CN6.1 – CN 2.9	6840 Ω-±5.0
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Sketch at the side show the connectors of the diverter on the electrical card. Probes of the tester should be applied on to the related connectors.

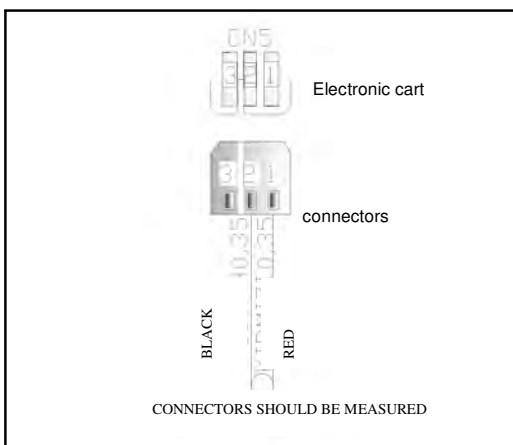
From the component :



Probes of the tester should be applied on to the related connectors as shown on the pictures.

### Salt Sensor

CN5.1 – CN5.2	0 $\Omega$ There is no salt $\infty$ $\Omega$ There is salt.
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Sketch at the side show the connectors of the salt sensor on the electronic card. Probes of the tester should be applied on to the related connectors.

From the component :

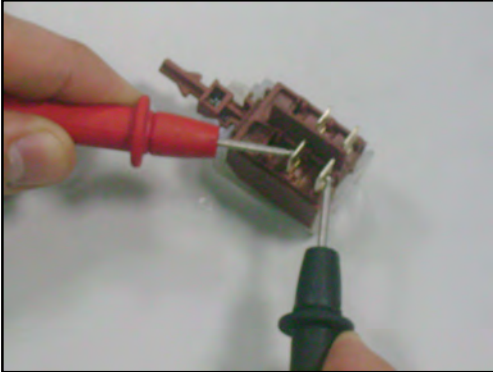


Salt sensor can also be measured from the water softener when the salt sensor assembled on the water softener.

### ON/OFF BUTTON

When the button pressed	0 $\Omega$
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( can not be measured from the electrical card)

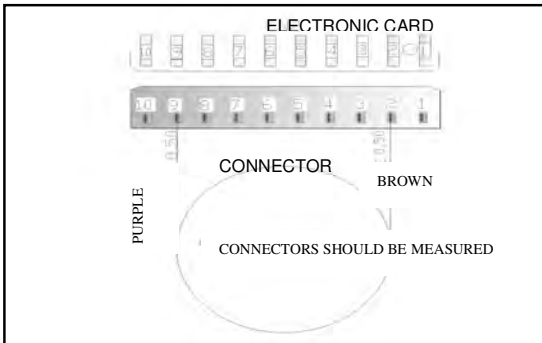


Probes of the tester should be applied on to the related connectors as shown on the pictures.

### DOOR SWITCH

From the electrical card

CN2.9 – CN2.2	0 $\Omega$ ( DOOR IS CLOSE )
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Above sketch show the connectors of the door switch on the electrical card.

From the component :



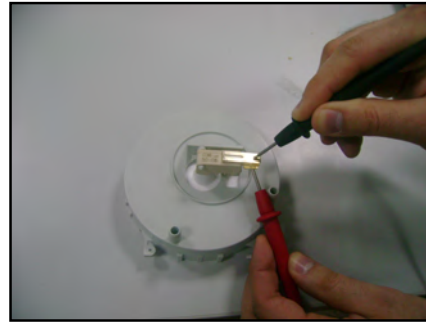
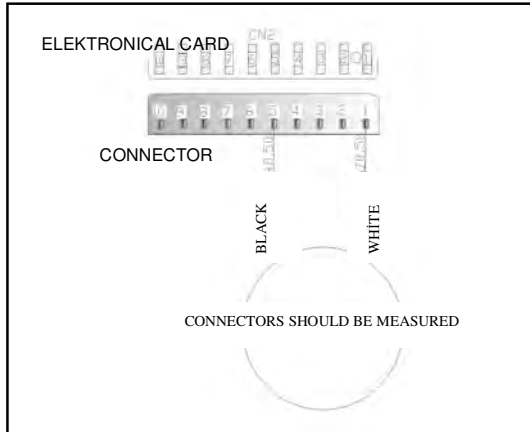
Probes of the tester should be applied on to the related connectors.



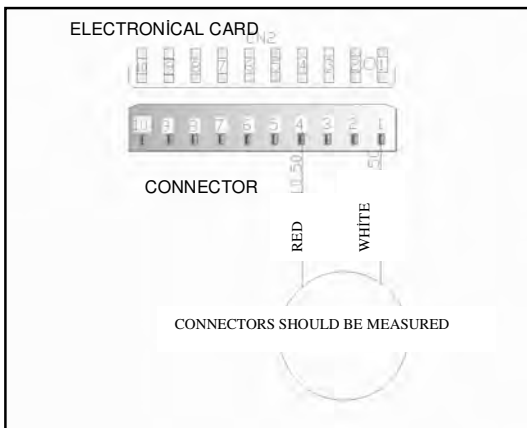
## FLOATER

CN2.1 – CN 2.5	(KONUM 1)	MICROSWITCH IS INACTIVE (NO WATER)
0 $\Omega$		
CN2.1–CN2.4	(KONUM 2)	MICROSWITCH IS ACTIVE (WATER)
$\infty \Omega$		

From the component :



**Position 1:** You can check the floater by controlling the specified value intervals.

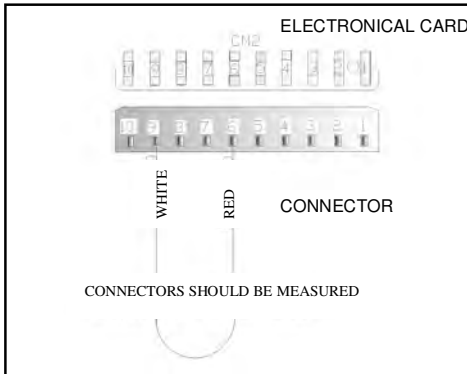


**Position 2:** If failure code is occurred related with the floater within control the above values; you can figure out whether leakage occurs or not.

## FAN MOTOR

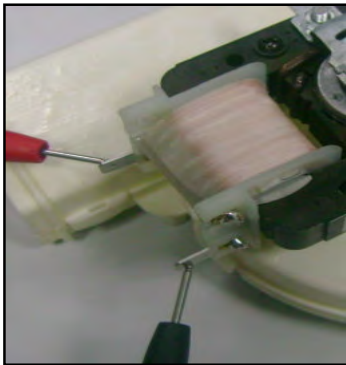
*From the electrical card :*

CN 2.6 – CN 2.9	238.6 ± % 5
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Sketch at the side show the connectors of the fan motor on the electrical card. Probes of the tester should be applied on to the related connectors.

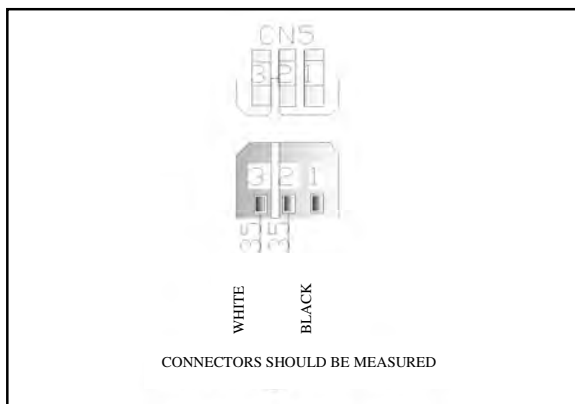
From the component :



## RINSE AID SENSOR

From the electrical card :

CN 5.2 – CN 5.3	0 Ω	There isn't any rinse aid
	∞ Ω	There is rinse aid



From the component :

