

# DISHWASHER SERVICE MANUAL

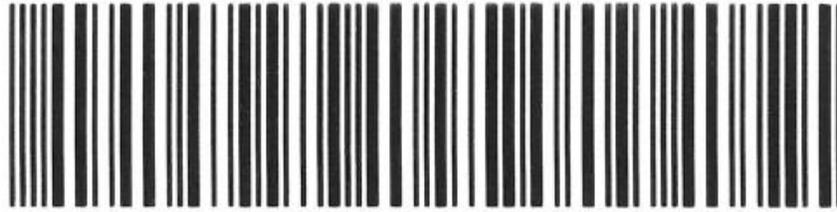


**A SERIES**

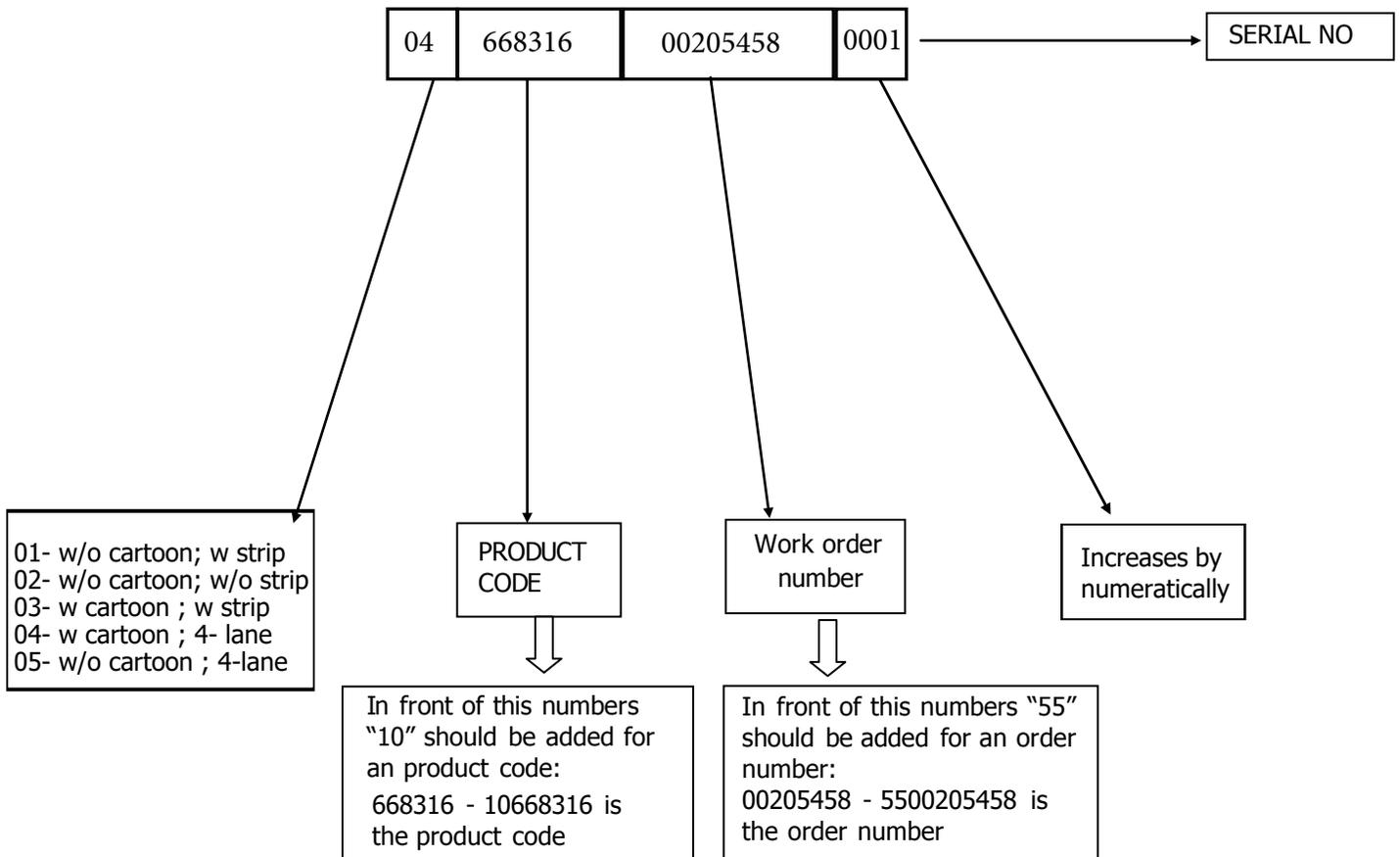
# Contents

Information sheet.....	2
Electrical components.....	3
Detergent / rinse aid dispenser.....	9
Washing specification and programs.....	11
Service failure codes.....	12
Setting the water hardness.....	24
Failure codes (possible problems).....	25
Necessary information have to be given to users while instakkating the dishwasher.....	28
Repair techniques components and resistance values.....	29
Component value measurement.....	31
Poor drying.....	45
Disassembly.....	46

**BARCODE STICKER CODE EXPLANATION / DISHWASHER:**



**SN:04668316002054580001**

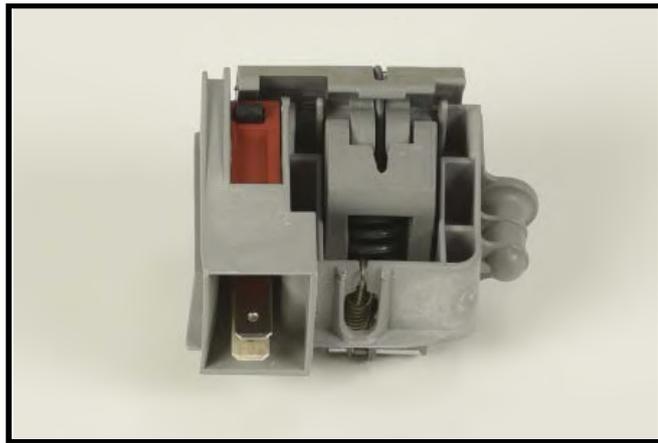
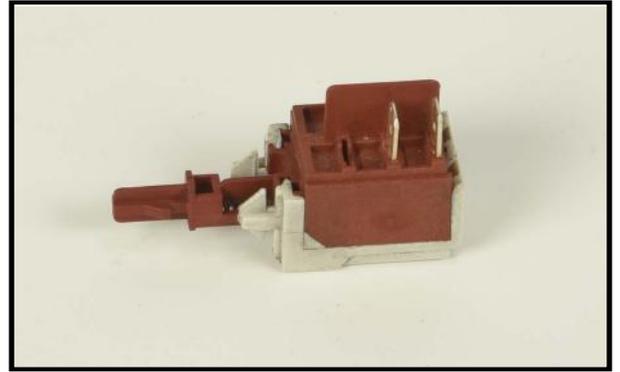


# ELECTRICAL COMPONENTS

## BUTTON ( ON / OFF SWITCH )

Button is assembled in the control panel unit.  
ON /OFF (two pole)

Voltage 250 V  
Currency 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.

Currency 16 (4 ) A

## CIRCULATION PUMP

Voltage	220/240
Frequency	50HZ
Total Power	90W
Coil Isolation Class	F
Thermal Protector	150°C
Pump Outlet Pressure	300mbar
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.



## FLOATER



## CAPACITOR

2,5  $\mu$ F - 450 V class S2

Capacitor is permanently connected to the circulation pump coils.



## DRAIN PUMP



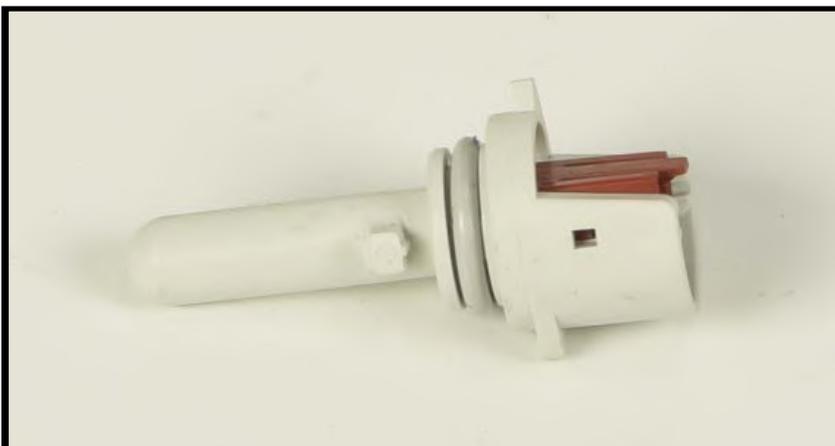
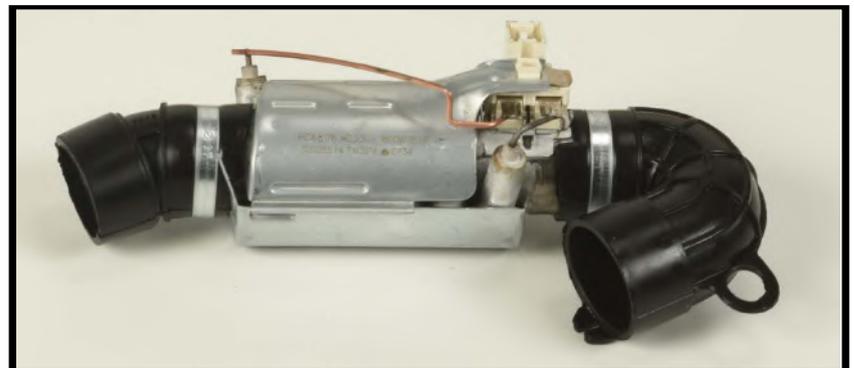
Voltage	220/240 volt
Frequency	50Hz
Flowrate	30W
Coil Resistance / Hanyu	220 $\Omega$ % $\pm$ 7
Coil Resistance / Leili	141 $\Omega$ % $\pm$ 7
Coil Isolation Class	F
Thermal Protector	120 $^{\circ}$ C

## HEATER

Voltage 220/240 volt

Total power 1800W

27.6-30.6 ohm



## NTC

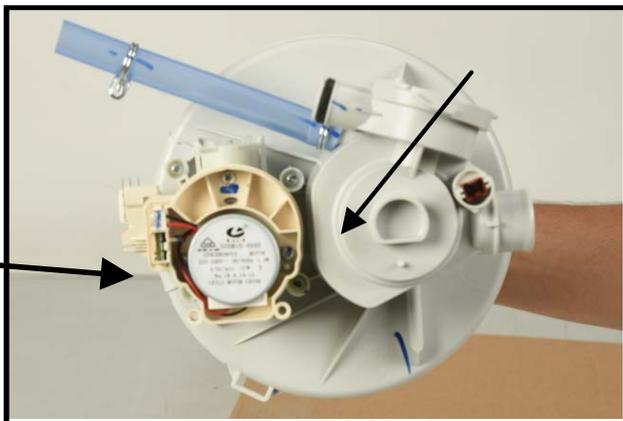
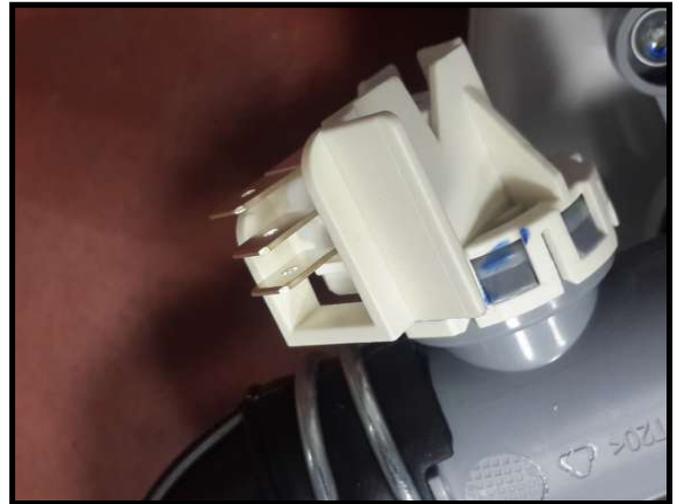
+25 $^{\circ}$ C	-	47.200	$\pm$	850	$\Omega$
+30 $^{\circ}$ C	-	37.500	$\pm$	675	$\Omega$
+40 $^{\circ}$ C	-	24.900	$\pm$	349	$\Omega$
+50 $^{\circ}$ C	-	17.000	$\pm$	170	$\Omega$
+60 $^{\circ}$ C	-	11.700	$\pm$	117	$\Omega$
+70 $^{\circ}$ C	-	8.280	$\pm$	108	$\Omega$
+80 $^{\circ}$ C	-	5.945	$\pm$	101	$\Omega$

## PRESSURE SWITCH

Voltage 220/240 v

Frequency 50/60 Hz

16 A - 3 Pins



## DIVERTER

There is diverter at A15 and A23 models It is assembled to the heater Casing Group.

Voltage	220/240 V
Frequency	50 Hz
Power	8W
Resistance	10500 ± %5 Ω

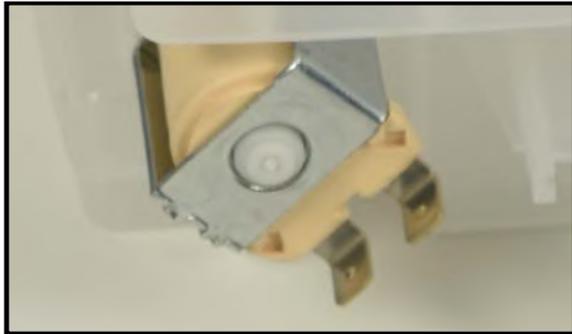
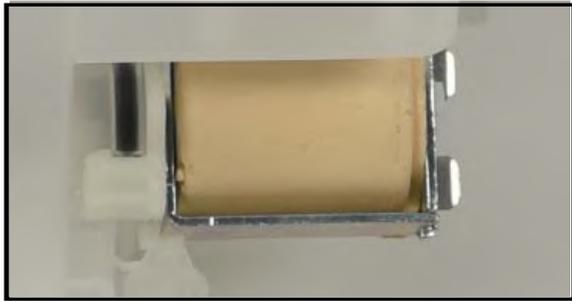
## WATER INLET VALVE

Single inlet and single outlet standard single coil solenoid valve.

Voltage	220 - 240
Total Power	6W
Flowrate	2,5 ±% 15 lt/dk
Coil Isolation Class	H
Resistance	4200 ±%10

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	$3560 \pm \% 10 \Omega^{\circ}\text{C}$

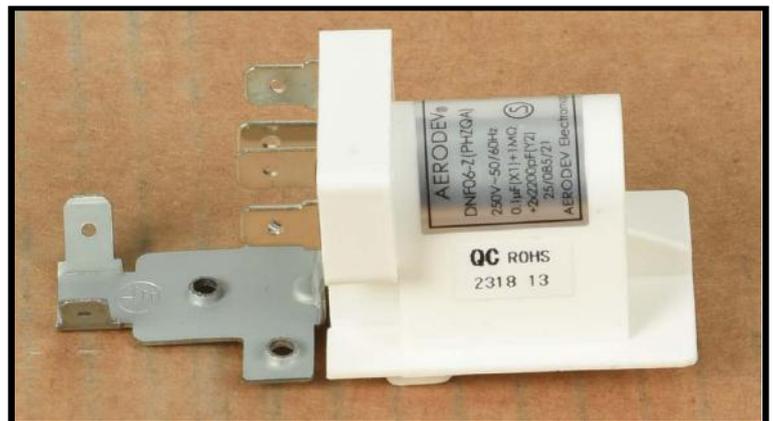
Regeneration valve is assembled on the water softener.

## PARASITE FILTER

Voltage	220/240
Frequency	50/60 Hz

$0,1 \mu\text{F (X1)} + 2 \times 2,2 \mu\text{F (Y2)} + 1\text{M}\Omega$

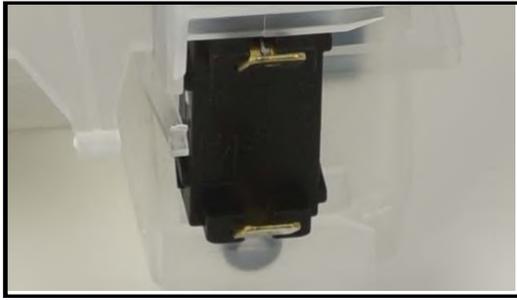
It is used to prevent parasites from the main supply It has been assembled to basement.



## TURBO FAN MOTOR

There is a thermal protector shaded pole motor, two pole temperature is between  $-40-150^{\circ}\text{C}$

There is turbo fan motor only at A models.



## SALT SENSOR

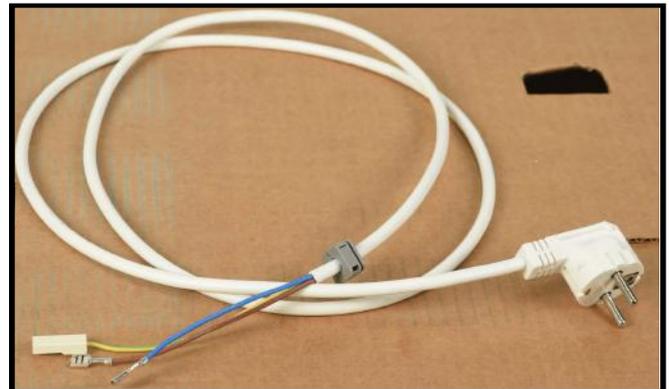
Voltage	250 V
Current	50 mA



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

## POWER CORD

Type	Euro 3'üü 1mm <sup>2</sup> , copper conducting
Isolation	TS 9760 HO 5VV - F
Plug	TS - IEC 60884 - 1 PVC injected
Length	1650 mm



## DRAIN HOSE



Drain hose maximum height	110 cm
Drain hose minimum height	50 cm
Drain hose maximum length	400 cm
Total Power	15 W
Voltage	220/240 V
Frequency	50 Hz
Resistance	238.6± %5 Ω

## **UPPER SPRAY ARM**

It distributes water from upper spray arm to dirty dishes in the upper basket.

It provides to wash the dishes in the upper basket through turning by the holes with various angles.



## **LOWER SPRAY ARM**

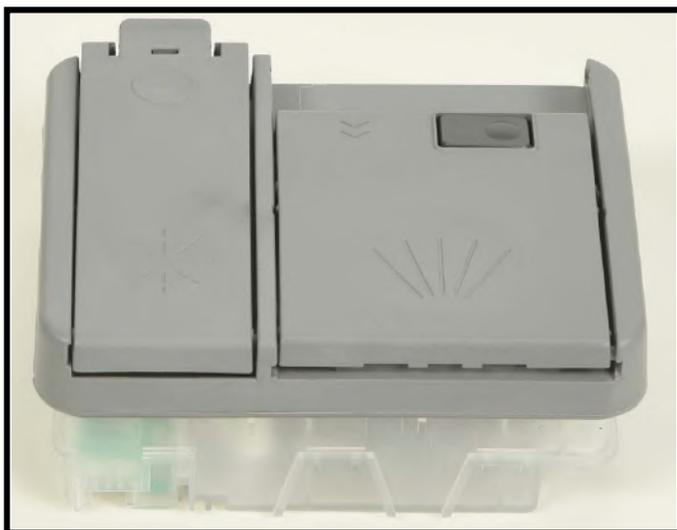
It distributes water from lower spray arm to dirty dishes in the lower basket.

It provides to wash the dishes in the lower basket through turning by the holes with various angles.



## DETERGENT / RINSE AID DISPANSER

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 operation the system.



## RINSE AID SET

In order to enter rinse aid set, user applies below steps.

- Power ON; press Up button at least for 5" for models without display  
Power ON; press Program button at least for 5" for models with display. For A4 models, use delay button and press it for 5".
- If "Rinse aid set" is recognized;  
all leds blink twice if model is without display. If model has display, "rA" is shown.
- Release program button. The last setting level is viewed\*.
- Press program button to set the desired level.

At any pressure of program button rinse aid level is incremented. The level 1 returns after level 5. For models without display; rinse aid levels are the same with water hardness levels as shown in the table.

Level	Wash	Dry	End
1(0cc)	FIX	OFF	OFF
2(1,5cc)	OFF	FIX	OFF
3(3cc)	OFF	OFF	FIX
4(4,5cc)	FIX	FIX	OFF
5(6cc)	FIX	OFF	FIX

## WATER HARDNESS SET

Only service can execute this procedure. This procedure erases the cycle counter. For AU Y models, water hardness level is level 1 as default.

Water Level	Hardness	German Hardness °dH	French hardness °dF	British 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

### For models w/o display;

Power ON and press Up button at least for 3”.

If “Hardness set” is recognized all leds blink for 2”. This means that all leds blink once.

Release Up button. The last setting level is viewed\*. Press Up button to increase press down button to decrease the level.

At any pressure of up button hardness level is increased. Hardness level 1 returns after hardness level 6. At any pressure of down button hardness level is decreased. Hardness level 6 returns after hardness level 1. If it is the first hardness set, hardness level is level 3.

Level	Wash	Dry	End
1	FIX	OFF	OFF
2	OFF	FIX	OFF
3	OFF	OFF	FIX
4	FIX	FIX	OFF
5	FIX	OFF	FIX
6	OFF	FIX	FIX

# WASHING SPECIFICATIONS AND PROGRAMS

## SELECTING AND STARTING PROGRAM AT POWER ON(BEFORE PROGRAM STARTS)

When the dishwasher is switched on,

**For models w/o display;**

COMMANDS	On/Off	Start/Stop	Wash	Dry	End
Switch on	ON	ON	OFF	OFF	OFF
Select program	ON	ON	OFF	OFF	OFF
Pressure of Start/Stop button	ON	OFF	ON	OFF	OFF

When user selects a program, related program led is ON. After pressing Start/Stop button, related program and wash led are ON. Note: When user always presses up button, first program follows last program. (ex: Program1-2-3-4-5-6-1-2-...)When user always presses down button, last program follows first program.(ex: Program 6-5-4-3-2-1-6-5-4-..)

## SERVICE TEST

Only service can execute this procedure.

- Power OFF; press Start/Stop button.
- For all models: Power ON by pressing On/Off button and continue to press Start/Stop button at least for 6".
- When "Service test" is recognized
  - **For models w/o display:** All leds are ON.If model has sliding dispenser, all leds blink three times and service test starts.
  - **For models w/ display:** All leds are ON, SP is visualized on display and service test starts. During the first 6" of test, if a failure code is stored in memory, its codification blinks. Also at the end of the test if an error occurs its error code blinks.

During the test, SP is shown.

Step		Time	Tested Load
0	Show code	6"	Before start, the code of last error is visualized (see below)
1	Drain	6"	Drain pump.
2	Fill (3l/2,5l)*	~ 1'	Flow meter; Inlet Valve;
3	Fill + Wash (0,5/1lt)**		Flow meter; Inlet Valve; Pressure Switch;
4	Turb. Sensor	30"	Measure of turbidity sensor
5	Wash	1'	Circulation pump; Regeneration Valve; detergent dispenser.
6	Wash + Heat ***	5'	Heater (PSW); NTC; diverter (position).
7/8	Reg. Valve + Turbo Fan	1'	Regeneration Valve + Turbo Fan
9	Water V+Drain	1'20"	Water Valve; Drain pump; Pressure switch
10	Drain	20"	Drain pump; pressure switch.
11	End	-	Code error or end led

\* 3lt in A1; 2,5lt in A2.

\*\* 0,5lt in A1; 1lt in A2.

\*\*\* In service test the unsuccessful heating failure routine works with reduced time of recognize (first measure at 2'20", second measure t 4'20")

If during the service test, the door is opened, Start/Stop led blinks (for models w/ display "SP" is shown).

If during the service test, the Start/Stop button is pressed, the program corresponding on the program leds(for models w/o display) or display(for models w/ display) position starts.

To reset the service test, press On/Off button or plug out and then plug in.

Also at the end of the test, if an error does not occur, any error code is not visualized. Machine will be standby position.

*Note: If user did not set water hardness level before service test, "SE" is shown at the beginning and end of service test.*

## SERVICE FAILURE CODES

### For models w/o display;

Name	S_P	Wash	Dry	End	display	Notes
Overflow/Leakage	-	Blink	-	Blink	F0/F1	In the normal work only leakage is visualized.
Drain time out	Blink	-	-	Blink	F2	
Presence Flow meter impulses	-	-	-	Blink	F3	
Absence Flow meter imp.	-	Blink	-	-	F4	In the normal work is not visualized.
Empty Level	Blink	-	-	-	F5	
Re-Fill time out	Blink	-	-	-	F5	
NTC ca/cc	Blink	Blink	-	-	F6	
Overheating	Blink	-	Blink	-	F7	
Unsuccessful heating	-	Blink	Blink	-	F8	In the normal work is visualized at the end of prg
Parameter set salt incorrect	Blink	Blink	-	Blink	SE	In the normal work this failure is not visualized.
CK Parameters	Blink	Blink	Blink	Blink	FE	
HIGH VOLTAGE	Blink	Blink	Blink	-	HI	
LOW VOLTAGE	-	Blink	Blink	Blink	LO	

**For models w/ display;**

Name	DISPLAY	Notes
Overflow	F0	In the normal work this failure is not visualized.
Leakage	F1	
Draining time out	F2	
Presence of Flow meter impulses	F3	
Absence of Flow meter	F4	In the normal work this failure is not visualized.
Empty Level	F5	
Re-Fill time out	F5	
NTC ca/cc	F6	
Overheating	F7	
Unsuccessful heating	F8	
Diverter opened	F9	
Turbidity Sensor	FA	In the normal work this failure is not visualized.
Parameter set salt incorrect	SE	In the normal work this failure is not visualized.
CK Parameter	FE	
High Voltage	HI	In the normal work this failure is not visualized.
Low Voltage	LO	In the normal work this failure is not visualized.

## WASHING SPECIFICATIONS AND PROGRAMS

### SELECTING AND STARTING PROGRAM AT POWER ON(BEFORE PROGRAM STARTS)

When the dishwasher is switched on,

**For models w/o display;**

COMMANDS	On/Off	Start/Stop	Wash	Dry	End
Switch on	ON	ON	OFF	OFF	OFF
Select program	ON	ON	OFF	OFF	OFF
Pressure of Start/Stop button	ON	OFF	ON	OFF	OFF

When user selects a program, related program led is ON. After pressing Start/ Stop button, related program and Wash led are ON.

Note: When user always presses up button, first program follows last program. (ex: Program1-2-3-4-5-6-1- 2-...)When user always presses down button, last program follows first program.(ex: Program 6-5-4-3-2-1- 6-5-4-..)

**For models w/ display;**

- The duration of the selected cycle is shown on the display.

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End
Switch on	ON	ON	OFF	OFF	OFF	OFF
Select program	ON	ON	OFF	OFF	OFF	OFF
Pressure of Start/Stop button	ON	OFF	ON	OFF	OFF	OFF

- Default program is "Eco program".

- When the dishwasher is powered off and on again in selection situation, the last executed program and options are not visualized on screen anymore. Every time machine is energized, Eco program is set as default.

## OPENING AND CLOSING DOOR(BEFORE PROGRAM STARTS)

**For models w/o display;**

COMMANDS	On/Off	Start/Stop	Wash	Dry	End
Door open	ON	ON	OFF	OFF	OFF
Door closed	ON	ON	OFF	OFF	OFF

**For models w/ display;**

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End
Door open	ON	ON	OFF	OFF	OFF	OFF
Door closed	ON	ON	OFF	OFF	OFF	OFF

## OPENING AND CLOSING DOOR DURING PROGRAM(NOT IN DRY STEPS)

During the program if the door is opened and re-closed without any modifications on the program button and without the pressure of Start/Stop button, the program continues. Washing program re-starts after 8" if the measured temperature is equal or more than 45°C.

**For models w/o display;**

COMMANDS	On/Off	Start/Stop	Wash	Dry	End
Door open	ON	Blink	ON	OFF	OFF
Door closed	ON	OFF	ON	OFF	OFF

\* When the door is opened, Washled is ON together with the blinking Start/Stop led.

**For models w/ display;**

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End
Door open	ON	Blink	ON/OFF*	ON/OFF*	OFF	OFF
Door closed	ON	OFF	ON/OFF*	ON/OFF*	OFF	OFF

\* **For models w/ display;**

- The duration of the selected cycle is shown on the display.

## OPENING AND CLOSING DOOR DURING PROGRAM(IN DRY STEPS)

During dry step: if the door is opened and re-closed, the program is ended.

### For models w/o display;

COMMANDS	On/Off	Start/Stop	Wash	Dry	End
Door open	ON	Blink	OFF	ON	OFF
Door closed	ON	OFF	OFF	OFF	ON

\*When the door is opened, Dry led is ON together with the blinking Start/Stop led.

When the door is closed, program ends and End led is ON.

- Next, if user presses program or Start/Stop or delay button, machine is in standby position( last executed programme led and Start/Stop led are ON)
- Then, if user presses Start/Stop button, wash led is ON.

### For models w/ display;

During dry step: if the door is opened and re-closed, the program is continued.

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End
Door open	ON	Blink	OFF	OFF	ON	OFF
Door closed	ON	OFF	OFF	OFF	ON	OFF

## OPENING AND CLOSING DOOR DURING PROGRAM(IN REGENERATION FIRST STEP)

During regeneration and resin washing step: if the door is opened and re-closed, the program continues.

### For models w/o display;

COMMANDS	On/Off	Start/Stop	Wash	Dry	End
Door open	ON	Blink	OFF	ON	OFF
Door closed	ON	OFF	OFF	ON	OFF

\*When the door is opened, Dry led is ON together with the blinking Start/Stop led.

When the door is closed, Dry led is

### ON. For models w/ display;

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End
Door open	ON	Blink	OFF	OFF	ON	OFF
Door closed	ON	OFF	OFF	OFF	ON	OFF

## OPENING AND CLOSING DOOR DURING PROGRAM(IN REGENERATION SECOND STEP)

During regeneration and resin washing step: if the door is opened and re-closed, the program is ended.

### For models w/o display;

COMMANDS	On/Off	Start/Stop	Wash	Dry	End
Door open	ON	Blink	OFF	ON	OFF
Door closed	ON	OFF	OFF	OFF	ON

\*When the door is opened, Dry led is ON together with the blinking Start/Stop led.

When the door is closed, the program ends. Machine is in standby position( last executed programme led and Start/Stop led are ON)

### For models w/ display;

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End
Door open	ON	Blink	OFF	OFF	ON	OFF
Door closed	ON	OFF	OFF	OFF	OFF	ON

When the door is opened and re-closed, program ends and display shows 0:00”.

## SELECTING AND STARTING PROGRAM WHEN DOOR IS OPENED(BEFORE PROGRAM STARTS)

### For models w/o display;

COMMANDS	On/Off	Start/Stop	Wash	Dry	End
Switch on	ON	ON	OFF	OFF	OFF
Door open	ON	ON	OFF	OFF	OFF
Select program	ON	ON	OFF	OFF	OFF
Pressure of Start/Stop button	ON	Blink*	ON	OFF	OFF
Door closed	ON	OFF	ON	OFF	OFF

\*If user presses Start/Stop button, Start/Stop led blinks and also related program led(s) is ON.

After closing the door, Wash led is ON and selected program starts.

### For models w/ display;

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End
Switch on	ON	ON	OFF	OFF	OFF	OFF
Door open	ON	ON	OFF	OFF	OFF	OFF
Select program	ON	ON	OFF	OFF	OFF	OFF
Pressure of Start/Stop button	ON	Blink*	ON	OFF	OFF	OFF
Door closed	ON	OFF	ON	OFF	OFF	OFF

If user selects a program when the door is open, related program duration is seen on the display. Then, if user presses Start/Stop button, duration of the selected program led blinks. After closing the door, Wash led is ON and selected program starts.

## TERMINATION OF A PROGRAM(END OF PROGRAM)

**For models w/o display;**

COMMANDS	On/Off	Start/Stop	Wash	Dry	End
End of program	ON	OFF	OFF	OFF	ON
Door open	ON	OFF	OFF	OFF	ON
Door closed	ON	ON	OFF	OFF	OFF

When the door is closed, last executed program led and Start/stop led are ON. Namely, Machine is in standby position.

**For models w/ display;**

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End	Digit
End of program	ON	OFF	OFF	OFF	OFF	ON	"0:00"
Door open	ON	OFF	OFF	OFF	OFF	ON	"0:00"
Door closed	ON	ON	OFF	OFF	OFF	OFF	duration of last executed program is shown

At the end of program, display shows 0:00.

## CANCELLING OF A PROGRAM(DURING PROGRAM)

**For models w/o display;**

COMMANDS	On/Off	Start/Stop	Wash	Dry	End
Pressure of Start/Stop button 3"	ON	ON	OFF	OFF	Blink
End of program	ON	OFF	OFF	OFF	ON

While pressing the Start/Stop button for 3", End led blinks. After cancelling is finished, "End Led" is ON.

**For models w/ display;**

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End	Digit
Pressure of Start/Stop button 3"	ON	ON	OFF	OFF	OFF	Blink	"0:01"
End of program	ON	OFF	OFF	OFF	OFF	ON	"0:00"

- Display shows "0:01" during cancelation process and End led blinks.
- Display shows 0:00 at the end of the cancelation process and End led is ON.

For both models with and without display:

If cancelling operation is paused, S/P led and end led blinks together.

### **IF USER PRESSES ANY BUTTON(AT THE END OF PROGRAM)**

**For models w/o display;**

<b>COMMANDS</b>	<b>On/Off</b>	<b>Start/Stop</b>	<b>Wash</b>	<b>Dry</b>	<b>End</b>
End of program	ON	OFF	OFF	OFF	ON
Selection of new program or pressed option	ON	ON	OFF	OFF	OFF
Pressure of Start/Stop button	ON	OFF	ON	OFF	OFF

-When user selects a program at the end of program, related program led and Start/Stop led are ON. If selected, related option led(s) is ON.

After pressing Start/Stop button Wash led is ON. If selected, related option led(s) is ON.

**For models w/ display;**

<b>COMMANDS</b>	<b>On/Off</b>	<b>Start/Stop</b>	<b>Wash</b>	<b>Rinse</b>	<b>Dry</b>	<b>End</b>	<b>Digit</b>
End of program	ON	OFF	OFF	OFF	OFF	ON	0:00
Selection of new program or pressed option	ON	ON	OFF	OFF	OFF	OFF	Duration of new program is shown
Pressure of Start/Stop button	ON	OFF	ON	OFF	OFF	OFF	Duration of new program

When user selects a program at the end of program, related program duration is shown on the display. If selected, related option led is ON.

After pressing Start/Stop button, program starts and Wash led is ON. If selected, related option led(s) is ON.

### **MODIFICATION OF A PROGRAM WITHOUT RESET**

The program continues with the flow program but with the parameters (temperature, times) of the new program. In heating step: If temperature is over than the new desired temperature, cut off heating step and go on with the next step with new parameters. If temperature is lower than the new desired temperature heat up water to the desired temperature level. In washing step: If the washing duration is over than the washing duration of new program, cut off washing step and go on with next step of new program. If the washing duration is lower than the washing duration of new program, go on with washing step. When new program is selected, display duration is changed to same step of new program.

**For models w/o display;**

<b>COMMANDS</b>	<b>On/Off</b>	<b>Start/Stop</b>	<b>Wash</b>	<b>Dry</b>	<b>End</b>
Washing cycle is in progress	ON	OFF	ON/OFF	ON/OFF	OFF

Pressure of Start/Stop button	ON	Blink	ON/OFF	ON/OFF	OFF
Select new program	ON	Blink	ON/OFF	ON/OFF	OFF
Pressure of Start/Stop button	ON	OFF	ON/OFF*	ON/OFF*	OFF

If user selects new program, related new program led is ON.

\*Program continues with the new parameters and related washing led is ON.

**For models w/ display;**

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End	Digit
Washing cycle is in progress	ON	OFF	ON/OFF	ON/OFF	ON/OFF	OFF	Duration of program
Pressure of Start/Stop button	ON	Blink	ON/OFF	ON/OFF	ON/OFF	OFF	Duration of program
Select new program	ON	Blink	ON/OFF	ON/OFF	ON/OFF	OFF	duration of new program
Pressure of Start/Stop button	ON	OFF	ON/OFF*	ON/OFF*	ON/OFF*	OFF	Duration of new program

\*If user presses Start/Stop button, program continues with the new parameters and related washing led is ON

**MODIFICATION OF A PROGRAM WITH RESET**

**For models w/o display;**

COMMANDS	On/Off	Start/Stop	Wash	Dry	End
Washing cycle is in progress	ON	OFF	ON/OFF	ON/OFF	OFF
Pressure of Start/Stop button 3"	ON	OFF	OFF	OFF	Blink
Drain of water	ON	OFF	OFF	ON	Blink
End of Drain	ON	OFF	OFF	OFF	ON*
Select new program	ON	ON	OFF	OFF	OFF

\*During the cancellation process End led blinks. After cancelling is finished, "End Led" is ON.

After the cancellation process, if user selects new program, related program led is ON.

**For models w/ display;**

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End	Digit
Washing cycle is in progress	ON	OFF	ON/OFF	ON/OFF	ON/OFF	OFF	Duration of program

Pressure of Start/Stop button 3"	ON	OFF	OFF	OFF	OFF	Blinks	Duration of program
Drain of water	ON	OFF	OFF	OFF	ON	Blinks	0:01
End of Drain	ON	OFF	OFF	OFF	OFF	ON	0:00
Select new program	ON	ON	OFF	OFF	OFF	OFF	duration of new program

- Display shows "0:01" during reset process.
- Display shows "0:00" at the end of the reset process

## SWITCH OFF THE MACHINE DURING PROGRAM AND BEFORE STARTING PROGRAM

When user presses On/Off button in standby position, machine is changed to Power OFF position and all leds and display are OFF.

**For models w/o display;**

COMMANDS	On/Off	Start/Stop	Wash	Dry	End
Before starting program	ON	ON	OFF	OFF	OFF
Pressure of On/Off button	OFF	OFF	OFF	OFF	OFF

**For models w/ display;**

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End	Digit
Before starting program	ON	ON	OFF	OFF	OFF	OFF	duration of program
Pressure of On/Off button	OFF	OFF	OFF	OFF	OFF	OFF	OFF

## SWITCH OFF THE MACHINE DURING PROGRAM AND AFTER STARTING PROGRAM

When machine is changed to Power OFF position during program, all leds are OFF, display is OFF, Program is paused and all electrical components are stopped. After pressing On/Off button, machine is ON. Selecting any program does not affect the program flow of previously selected program. Therefore, previously selected program is resumed.

**For models w/o display;**

COMMANDS	On/Off	Start/Stop	Wash	Dry	End
Washing cycle is in progress	ON	OFF	ON/OFF	ON/OFF	OFF
Machine is "POWER OFF"	OFF	OFF	OFF	OFF	OFF
Machine is "POWER ON"	ON	OFF	ON/OFF	ON/OFF	OFF
Select new program*	ON	OFF	ON/OFF	ON/OFF	OFF
Pressure of Start/Stop button	ON	Blink	ON/OFF	ON/OFF	OFF
Pressure of Start/Stop button again	ON	OFF	ON/OFF	ON/OFF	OFF

\*New program cannot be selected without pressing Start/Stop button.

**For models w/ display;**

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End	Digit
Washing cycle is in progress	ON	OFF	ON/OFF	ON/OFF	ON/OFF	OFF	Duration of program
Machine is "POWER OFF"	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Machine is "POWER ON	ON	OFF	ON/OFF	ON/OFF	ON/OFF	OFF	Duration of program
Select new program*	ON	OFF	ON/OFF	ON/OFF	ON/OFF	OFF	Duration of new program
Pressure of Start/Stop button	ON	Blink	ON/OFF	ON/OFF	ON/OFF	OFF	Duration of new program
Pressure of Start/Stop button again	ON	OFF	ON/OFF	ON/OFF	ON/OFF	OFF	Duration of new program

\*New program cannot be selected without pressing Start/Stop button.

Note: If the washing step is Dry before machine is powered off, program ends after machine is powered on.

## CANCELLING OF A PROGRAM (DURING DELAY TIME)

**For models w/o display;**

COMMANDS	On/Off	Start/Stop	Wash	Dry	End	Selected indicators (delay timer)	Related program led
Pressure of Start/Stop button for 3"	ON	ON	OFF	OFF	Blink	ON	ON
End of program	ON	OFF	OFF	OFF	ON*	OFF	OFF

While pressing the Start/Stop button for 3", selected indicator led(3h, 6h or both 3h and 6h) is ON and related program led is ON.

\*During the cancellation process End led blinks. After cancelling is finished, "End Led" is ON.

**For models w/ display;**

COMMANDS	On/Off	Start/Stop	Wash	Rinse	Dry	End	Digit
Pressure of Start/Stop button for 3"	ON	ON	OFF	OFF	OFF	Blinks	Delay duration
End of program	ON	OFF	OFF	OFF	OFF	ON*	"0:00"

While pressing the Start/Stop button for 3", delay duration is shown on display.

\*During the cancellation process End led blinks and digit shows "0:01". At the end of cancelling, End led is ON and digit shows "0:00".

## MODIFICATION OF A PROGRAM DURING DELAY TIME

After selecting new program or same program and pressing Start/Stop button, Delay time resumes, does not start again.

### For models w/o display;

COMMANDS	On/Off	Start/Stop	Selected indicators(delay timer)	Related program led
During delay time	ON	ON	ON	ON
Pressure of Start/Stop button	ON	Blink	ON	ON
Select new program	ON	Blink	ON	New program led is ON
Pressure of Start/Stop button	ON	ON	ON	New program led is ON

New program starts with delay which is selected before.

### For models w/ display;

COMMANDS	On/Off	Start/Stop	Delay	Digit
During delay time	ON	ON	ON	Delay duration
Pressure of Start/Stop button	ON	Blink	ON	1" Delay duration, 1" duration of program are shown alternately
Select new program	ON	Blink	ON	1" Delay duration, 1" duration of new program are shown alternately
Pressure of Start/Stop button	ON	ON	ON	Delay duration

## SWITCH OFF THE MACHINE DURING DELAY TIME

For all models:

When only delay timer is active;

\* If Stand-by off-on is done; delay is cancelled

Namely, If user cuts the energy by On/Off button and then machine is powered ON; Machine is in standby position. Then if user selects new program and presses Start/Stop button, selected program starts without delay.

\* If Power off-on occurs; delay continues.

Namely, If mains voltage is cut, power is off and then power is on; delay continues, Start/Stop led is ON and related delay led blinks twice

When Delay timer is active and then child lock is activated;

\* Delay timer continues for both standby off-on and power off-on.

**For models w/o display;**

COMMANDS	On/Off	Start/Stop	Selected indicators(delay timer)
During delay time	ON	ON	ON
Standby off	OFF	OFF	OFF
Standby on	ON	ON	OFF
Select new program	ON	ON	OFF
Pressure of Start/Stop button	ON	OFF	OFF

**For models w/ display;**

COMMANDS	On/Off	Start/Stop	Delay icon	Digit
During delay time	ON	ON	ON	Delay duration
Mains voltage is cut(Power off)	OFF	OFF	OFF	OFF
Mains voltage is back(Power on)	ON	ON	ON	Delay duration blinks twice and then resumes
Select new program	ON	ON	ON	Delay duration
Pressure of Start/Stop button	ON	OFF	ON	1" Delay duration, 1" duration of new program are shown alternately

**Note:** When user selects delay time but does not presses Start/Stop button: if user switch off/on the machine, delay timer is cancelled and machine is on standby position.

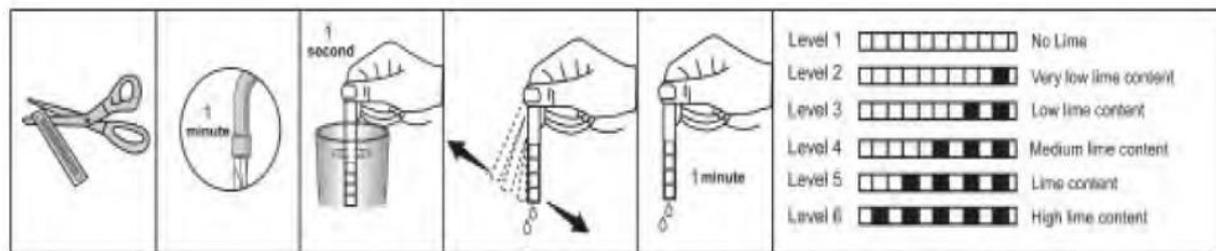
**Note:** When user starts a programme with delay and activates child lock: if user switch off/on the machine or mains voltage is cut; both delay and child lock is active when machine is energized.

# SETTING THE WATER HARDNESS

## TEST STRIP;

The washing effectiveness of your machine depends on the softness of the tap water. For this reason, your machine is equipped with a system that reduces the hardness in mains water supply. The washing effectiveness will increase when the system is correctly set. To make the system setting, use the testing strip, if it is available, and find the hardness of the mains water supply.

Open the testing strip.	Run water through your tap for 1 min.	Keep the testing strip in water for 1 sec.	Shake the testing strip after taking it out of water.	Wait for 1 min.	Make your machine's water hardness setting according to the result obtained through the testing strip.
-------------------------	---------------------------------------	--	---	-----------------	--



# **FAILURE CODES (Possible Problems)**

## **F1 (ALARM IS ACTIVE FOR OVERFLOW)**

### **FLOATER**

- Floater switch can be out of order or have a problem with the cable connection.

### **TUB**

- There can be a water leakage from the tub

### **ELECTRONIC CARD**

- Electronic card can be out of order.

## **F2 (THE WASTE WATER IN THE MACHINE CANNOT BE DISCHARGED)**

### **Drain hose**

- Water outlet hose is clogged
- Check of the water outlet hose position.

### **Drain pump**

- Check the drain pump resistance and power values
- There can be a problem with cable connection of the drain

### **Pressure switch**

- Pressure switch of the heater casing group can have a mechanical or cable connection problem.

## **F3 (ERROR OF CONTINUOUS WATER INPUT)**

### **Water inlet valve**

- Water inlet valve can be out of order or can not be closed.

### **Electronic card**

- Electronic card can be out of order.

## **F4 (FLOWMETER FAULTY)**

### **Flowmeter**

- Flowmeter can be out of order.
- Cable connection of flowmeter can be faulty.

### **Electronic card**

- Electronic card can be out of order.

## **F5 (INADEQUATE WATER SUPPLY)**

### **Water tap**

- Make sure the water input tap is totally open and that there is no water cut.

### **Water inlet hose**

- Close the water input tap, separate the water input hose from the tap and clean the filter at the connection end of the hose.

### **Water inlet valve**

- Water inlet valve filter can be clogged.
- Water inlet valve can be out of order. There can be a problem with the cable connection of water inlet valve.

### **Floater**

- Floater switch can be out of order or have a problem with the cable connection.

### **Pressure switch**

- Pressure switch of the heater can have a mechanical or cable connection problem.

### **Circulation pump**

- Circulation pump can be out of order or have a problem with the cable connection. External part can be blocked to the circulation pump.

## **F6 (NTC FAULTY)**

### **Ntc**

- Ntc can be out of order.
- Ntc cable connection can be faulty. Ntc can be short or open circuit.

### **Electronic card**

- Check the power and resistance value of heater.
- Check the cable connection of the heater.

## **F7 (EXTREME HEATING UP FAULTY)**

### **Ntc**

- If the water temperature inside machine higher than 77°C, ntc can be out of order.

### **Electronic card**

- Electronic card can be out of order.

## **F8 (INADEQUATE HEAT)**

### **Heater**

- Check the power and resistance values.
- Check the cable connection of the heater.

### **Electronic card**

- Check the electronic card

## **F9 (DIVERTER POSITION PROBLEM)**

### **Diverter**

- Check the values of the diverter.
- Check the cable connection of the diverter.

### **Electronic card**

- Check the electronic card

## **FA (TURBIDITY SENSOR FAULTY)**

### **Turbidity sensor**

- There can be some soil around the turbidity sensor.
- Check the cable connection of the turbidity sensor.

### **Electronic card**

- Check the electronic card.

# NECESSARY INFORMATION HAVE TO BE GIVEN TO USERS WHILE INSTALLATING THE DISHWASHER

Customer should be informed about following items.

- Give general information to user about the product.
- General information about washing programmes and suggest to the customer using suitable program according to the dirtiness level.
- Give information about additional functions.
- Give information to the customer about starting the machine, following the program, resetting the program and changing the program.
- Give information about activate and inactive the child lock. Customers should be informed about the child lock will not be inactive automatically at the end of the programme.

Models haved  $\frac{1}{2}$  half load option;



In  $\frac{1}{2}$  option when only upper Lamp is flashed, only upper spray Will be in operation.



In  $\frac{1}{2}$  option, when only lower lamp is flashed, only lower spray will be On operation.



When both lamps are flashed, this Function is half load function. If the Customers have little amount of Dishes, they should use this function.

**When both lamps are not flashed, It means the machine will continue normal operation. When the lamps are not flashing, does not mean spray arms are not rotating.**

- The customers should be informed about looking at instruction manual at first, when they face to failure.
- After installing the machine to a suitable place, run it unloaded for the first time.

**This should be recommended to the customers that they should search the instruction manual carefully when there is a possible repair.**

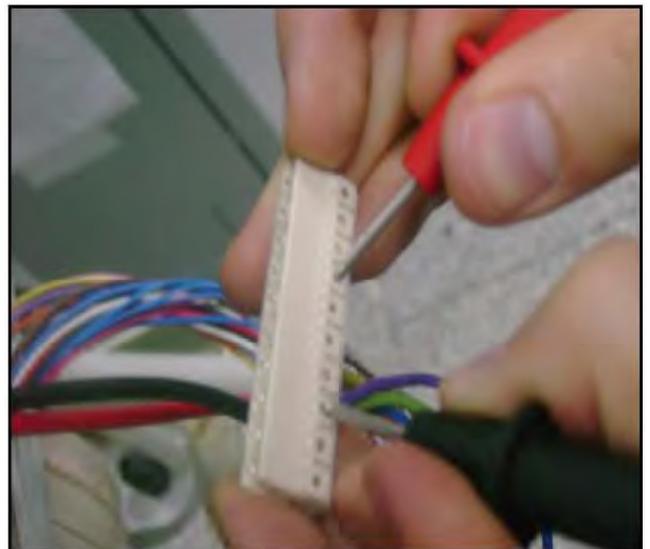
# REPAIR TECHNIQUES COMPONENTS AND RESISTANCE VALUES

COMPONENTS	C		T		NOTES
ON / OFF SWITCH	0 $\Omega$ on component		0 $\Omega$ on component		ON/OFF button is pressed
DOOR SWITCH	CN2.9 - CN2.2 0 $\Omega$		KN2.8 - KN2.10 0 $\Omega$		Door is close
PRESSURE SWITCH	CN2.10 - CN2.2	0 $\Omega$ $\infty \Omega$	KN2.9 - KN2.10	0 $\Omega$ $\infty \Omega$	Full fill water no water
DRAIN PUMP / HANYU	CN2.2 - CN2.4	220 $\Omega$ % $\pm 10$	KN2.4 - KN2.10	220 $\Omega$ % $\pm 10$	
DRAIN PUMP / LEILI	CN2.2 - CN2.4	141 $\Omega$ % $\pm 10$	KN2.4 - KN2.10	141 $\Omega$ % $\pm 10$	
WATER INLET VALVE	CN2.6 - CN2.9	4200 $\Omega$ $\pm$ %10 (20°C)	KN2.6 - KN2.8	4200 $\Omega$ $\pm$ %10 (20°C)	
REGENERATION VALVE	CN2.2 - CN2.7	3560 $\Omega$ $\pm$ %10(25°C)	KN2.2 - KN2.10	3560 $\Omega$ $\pm$ %10(25°C)	
SALT SENSOR	CN5.1 - CN5.2	0 $\Omega$ NO SALT $\infty \Omega$ THERE IS	KN50.10 - KN 50.11	0 $\Omega$ NO SALT $\infty \Omega$ THERE IS SALT	Measure just on the electronic
HEATER	29.1 $\pm$ 1,5 $\Omega$		29.1 $\pm$ 1,5 $\Omega$		Measure just on the component
DETERGENT DISPENSER	2300 $\Omega$ $\pm$ %10 (25 C°)		2300 $\Omega$ $\pm$ %10 (25 C°)		Measure just on the component
CIRCULATION PUMP	CN2.3 - CN2.9		KN2.3 - KN 2.8		Primary winding Secondary winding (from the component)
SET NTC SENSOR	CN 3.2 CN 3.1		KN 50.1 KN 50.2		
FAN MOTOR	CN 6.2 - CN 2.9		KN 6.2 - KN 2.8		
DIVERTER	CN 6.1 - CN 2.9 10500 $\pm$ %7 $\Omega$		KN 6.1 - KN 2.8 10500 $\pm$ %7 $\Omega$		
RINSE AID SENSOR	CN 5.3 - CN 5.2	0 $\Omega$ NO RINSE AID $\infty \Omega$ THERE IS RINSE	KN 50.8 - KN 50.9	0 $\Omega$ NO RINSE AID $\infty \Omega$ THERE IS RINSE AID	Rinse aid off Rinse aid on
FLOATER (MICROSWITCH)	CN2.1 - CN 2.5 CN2.1 - CN 2.4	0 $\Omega$ $\infty \Omega$	KN2.5 - KN 2.10 KN2.4 - KN 2.5	0 $\Omega$ $\infty \Omega$	Microswitch is inactive (no water) microswitch is active (there is water)

## MEASURING THE COMPONENTS FROM THE ELECTRICAL CARD

You might measure the components either connectors of electronic card or directly on the component.

Measuring from the connectors of electronic card gives definite result to define the repair. If you know the specialities and values of tester, you can easily determine the repair.



Picture (a)

### Example electronic card

Probes of the tester should be applied on to the related connectors of the electronic card; control the values according to the resistance value table. Picture (a)

# COMPONENT VALUES MEASUREMENT

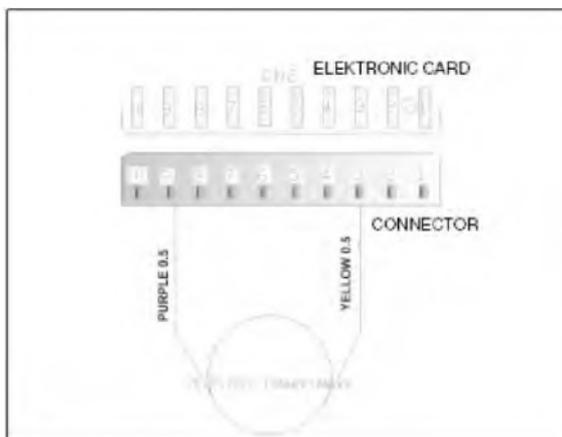
**Precaution: Always** remove the plug from the power socket before touching internal components.

## WASHING PUMP:

**From the electrical card:**

You can only measure the primary winding value from the electrical card. Resistance value of the primary winding must be

	C	T	
CIRCULATION PUMP	CN2.3 - CN2.9	KN2.3 - KN 2.8	Primary winding Secondary winding (from the component)



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



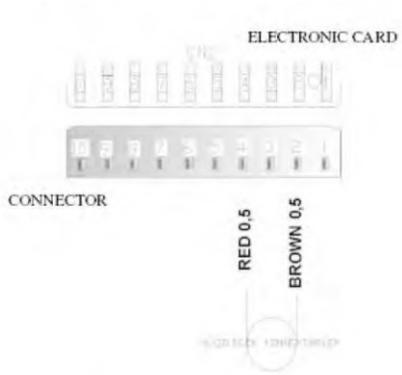
Measurement of the secondary windings of the washing pump (white cable – blue cable)

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

# DRAIN PUMP

From the electrical Card:

	C	T
DRAIN PUMP / HANYU	CN2.2 - CN2.4 220 Ω % ±10	KN2.4 - KN2.
DRAIN PUMP / LEILI	CN2.2 - CN2.4 141 Ω % ±10	KN2.4 - KN2.



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:

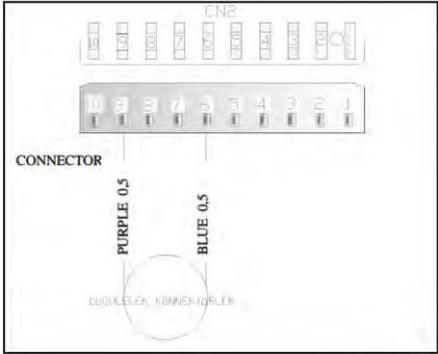


Probes of the tester should be applied on the related connectors as shown on the pictures.

# WATER INLET VALVE

From the electrical Card:

	C	T
WATER INLET VALVE	CN2.6 - CN2.9 4200 Ω ± %10 (20°C)	KN2.6 - KN2.8 4200 Ω ± %10 (20°C)



Above sketch show the connectors of the water inlet valve on the electrical card. Probes of the tester should be applies on to the related connectors.

From the component:

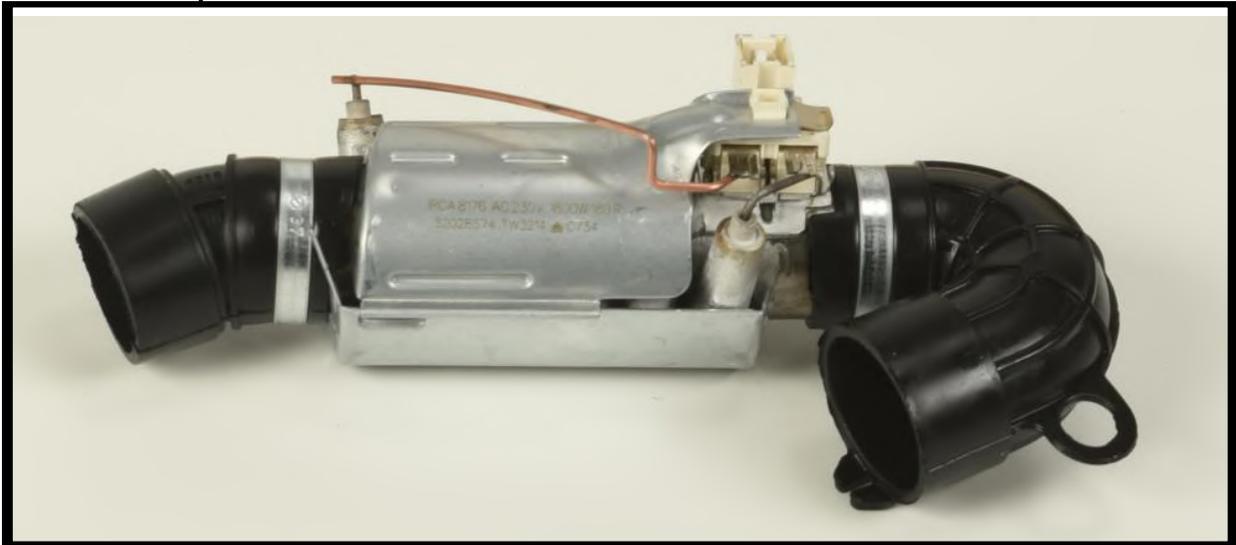


Probes of the tester should be applied on to the related connectors as shown on the pictures.

## HEATER

It can't be measured from the electrical card.

**From the component:**

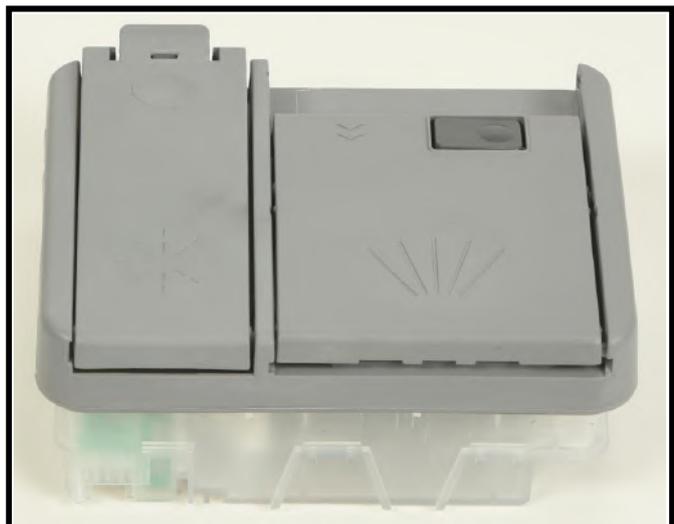


## DETERGENT DISPENSER

It can't be measured from the electrical card:

	C	T
DETERGENT DISPENSER	2300 $\Omega$ $\pm$ 10% (25 C°)	2300 $\Omega$ $\pm$ 10% (25 C°)

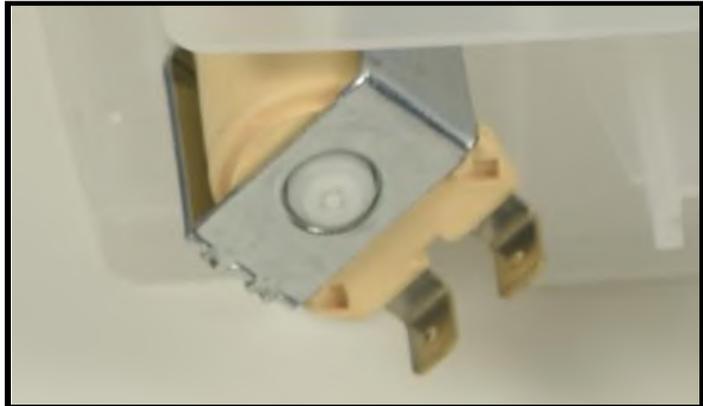
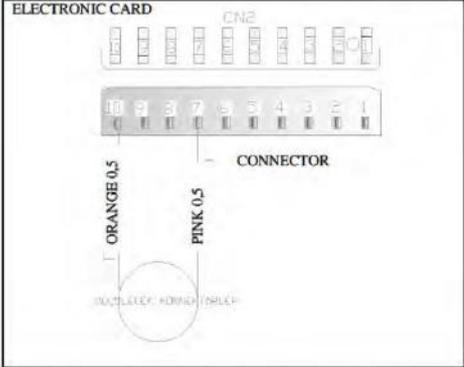
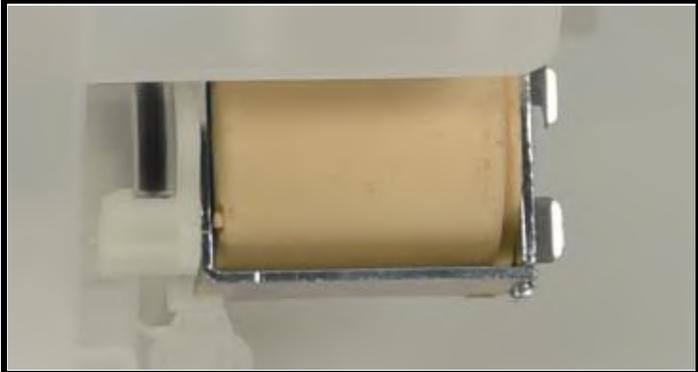
**From the component:**



# REGENERATION VALVE

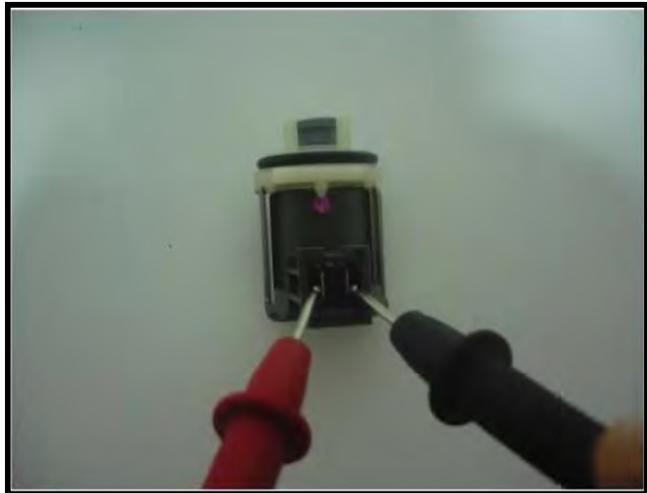
From the electrical Card:

	C	T
REGENERATION VALVE	CN2.2 - CN2.7 3560 Ω ± %10(25°C)	KN2.2 - KN2.10 3560 Ω ± %10(25°C)



Above sketch show the connectors of the regeneration valve on the electronic card. Probes of the tester should be applied on to the related connectors.

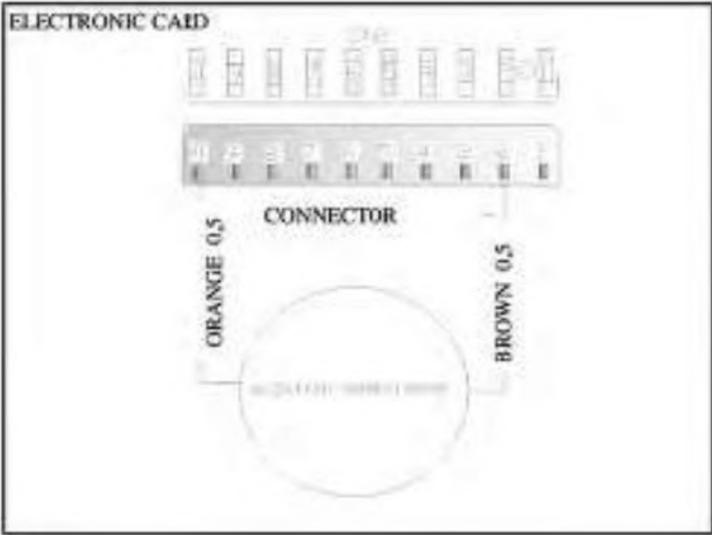
From the component:



# PRESSURE SWITCH

From the electrical card:

		C		T	
PRESSURE SWITCH	CN2.10 - CN2.2	0Ω ∞Ω	KN2.9 - KN2.10	0Ω ∞Ω	Full fill water no water



From the component:

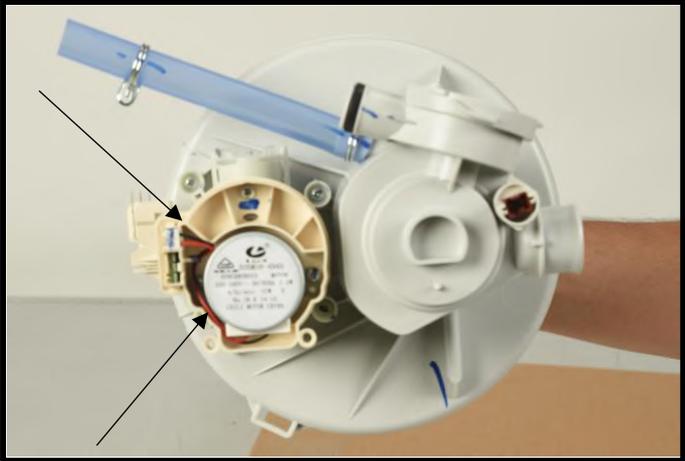
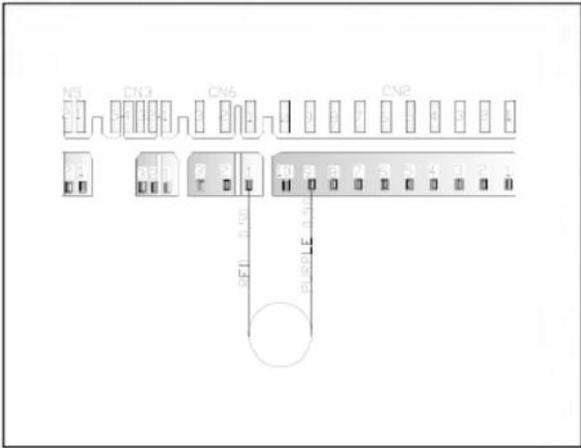


Probes of the tester should be applied on to the related connectors as shown in the picture above.

# DIVERTER

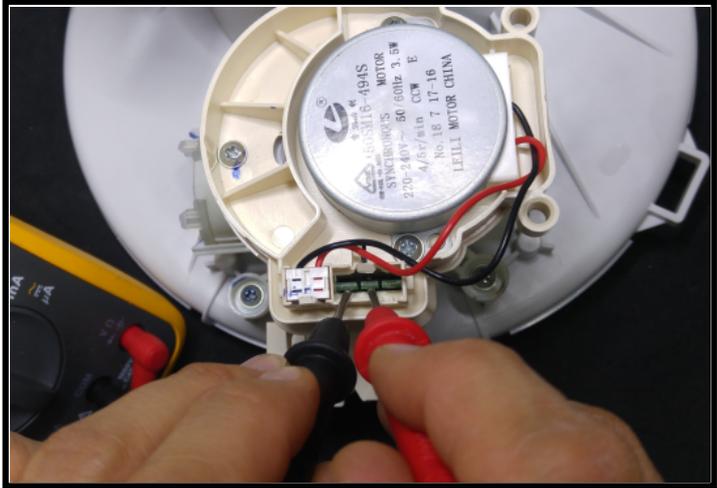
From the electrical Card:

	C	T
DIVERTER	CN 6.1 - CN 2.9 10500 ± %7 Ω	KN 6.1 - KN 2.8 10500 ± %7 Ω



Sketch above 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:

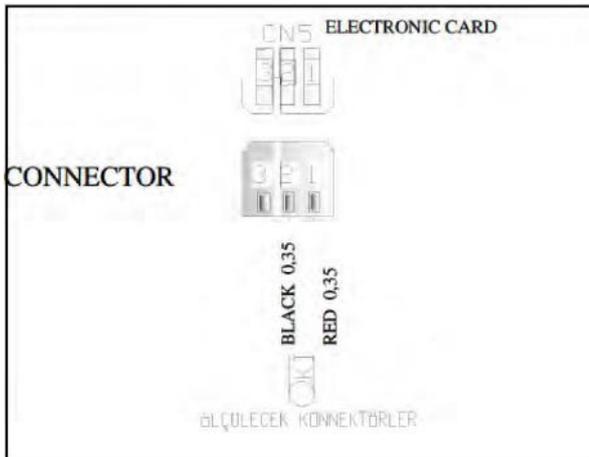


Probes of the tester should be applied on to the related connectors as shown on the pictures.

## SALT SENSOR

From the electrical card:

	C	T	
SALT SENSOR	CN5.1 - CN5.2 0 $\Omega$ NO SALT $\infty \Omega$ THERE IS SALT	KN50.10 - KN 50.11 0 $\Omega$ NO SALT $\infty \Omega$ THERE IS SALT	Measure just on the electronic



Sketch above show the connectors of the salt sensor on the electrical card. Probes of the tester should be applied on the related connectors.

From the component:



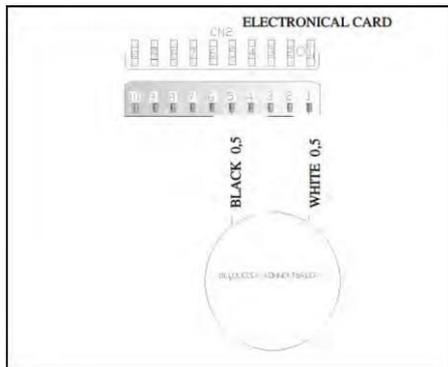
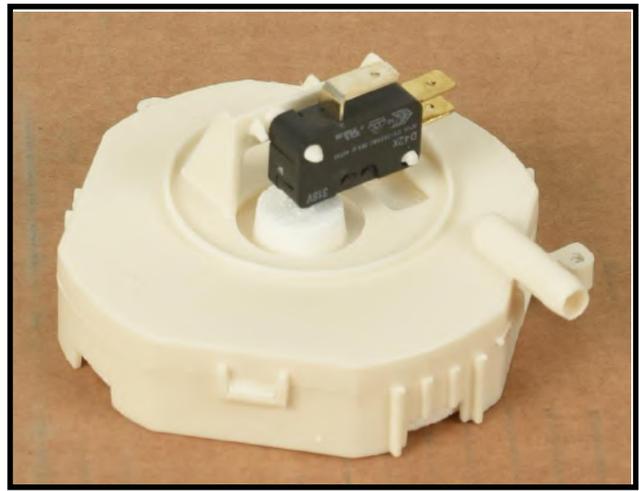
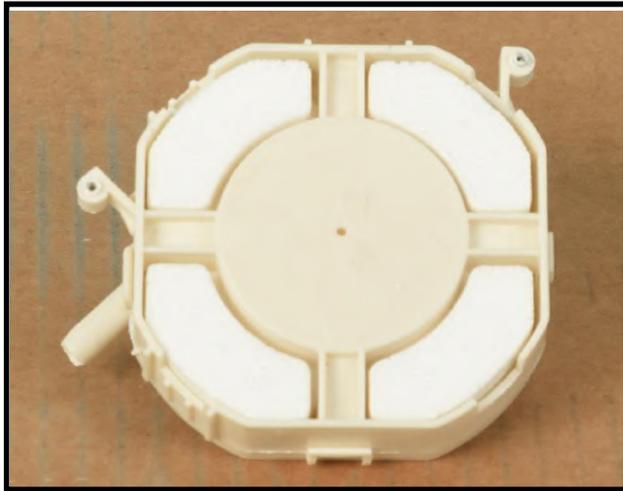
salt sensor can also be measured from the water softener when the salt sensor is assembled on the water softener.

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

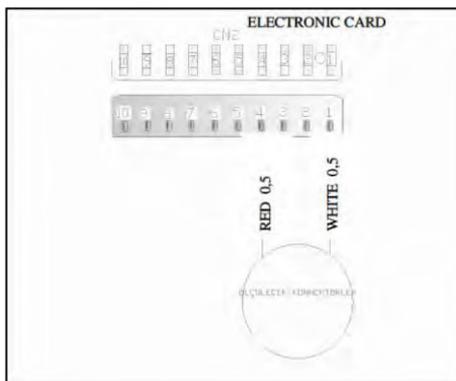
# FLOATER

From the electrical card:

		C		T	
FLOATER (MICROSWITCH)	CN2.1 - CN 2.5 CN2.1 - CN 2.4	$0\ \Omega$ $\infty\ \Omega$		KN2.5 - KN 2.10 KN2.4 - KN 2.5	$0\ \Omega$ $\infty\ \Omega$ Microswitch is inactive (no water) microswitch is active (there is water)



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

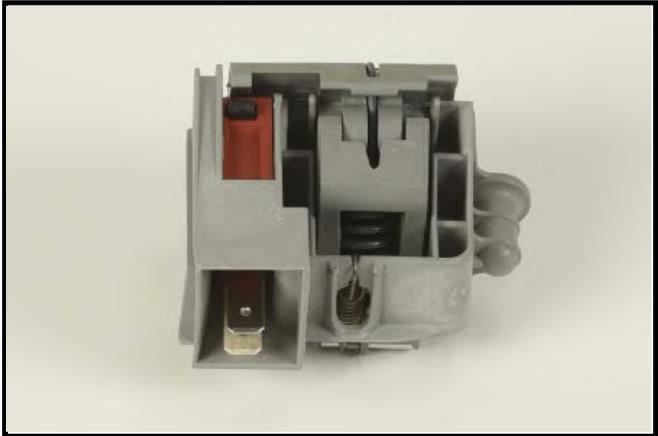
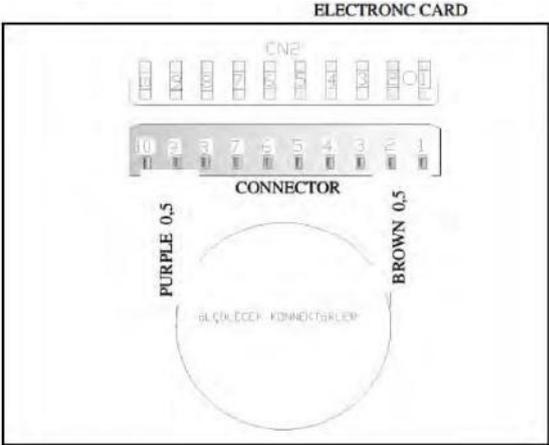


**Position 2 :** If failure code is occurred related with the floater within control the above values: You can figure out whether leakage occurs or not.

# DOOR SWITCH

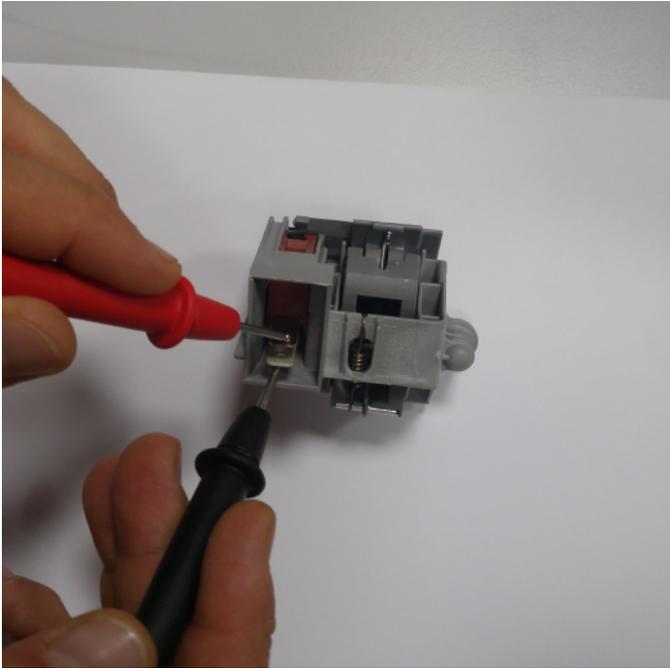
From the electrical card:

	C	T	
DOOR SWITCH	CN2.9 - CN2.2 0 Ω	KN2.8 - KN2.10 0 Ω	Door is close



Above sketch show the connectors of the door switch on the electrical card.

From the component:

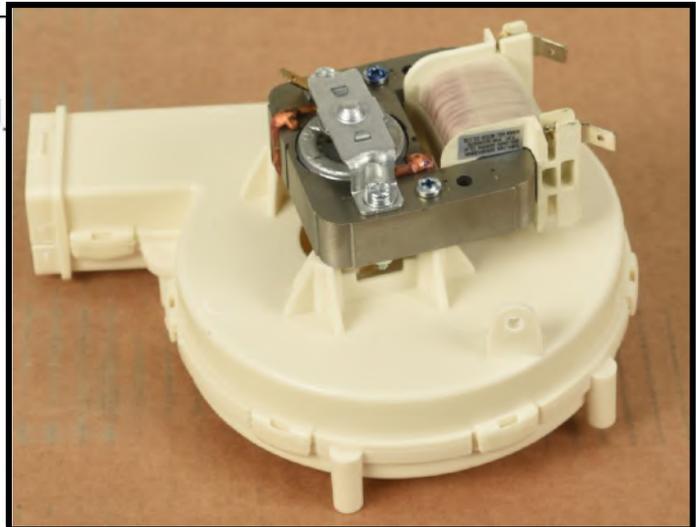
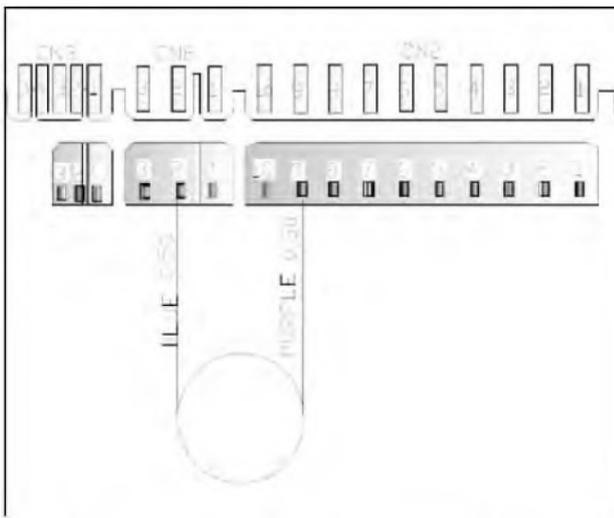


Probes of the tester should be applied on to the related connectors as shown on the pictures.

# FAN MOTOR

From the electrical card:

	C	T
FAN MOTOR	CN 6.2 - CN 2.9	KN 6.2 - KN 2.8



Above sketch shows the connectors of the fan motor on the electrical card.

From the component:

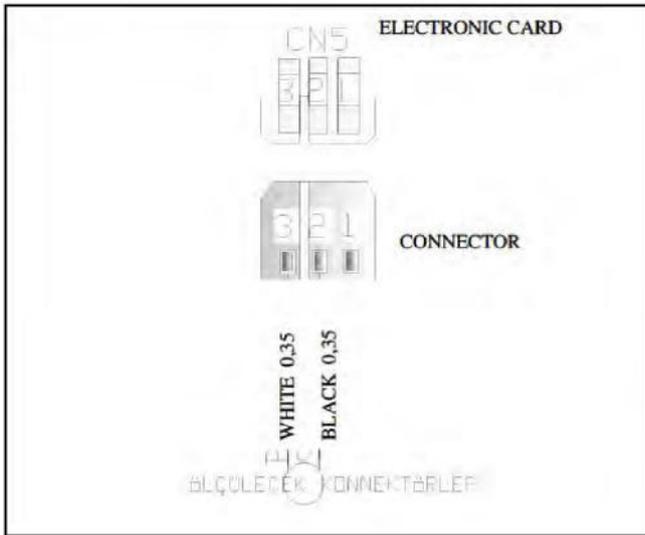


Probes of the tester should be applied on to the related connectors as shown on the pictures.

# RINSE AID SENSOR

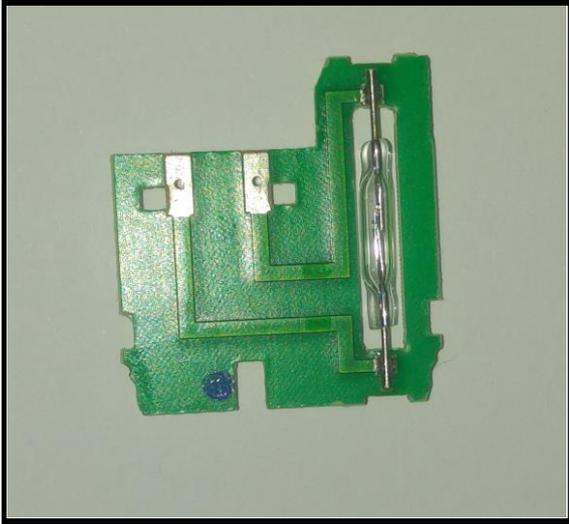
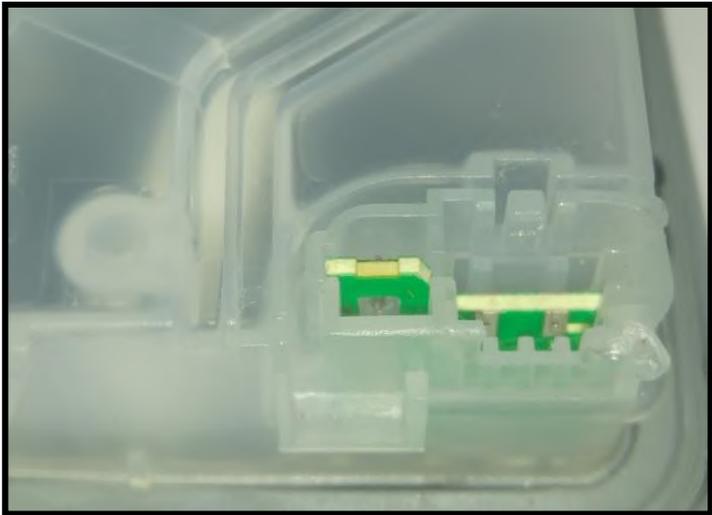
From the electrical card:

		C		T	
RINSE AID SENSOR	CN 5.3 - CN 5.2	0 Ω NO RINSE AID ∞ Ω THERE IS RINSE AID	KN 50.8 - KN 50.9	0 Ω NO RINSE AID ∞ Ω THERE IS RINSE AID	Rinse aid off Rinse aid on



Above sketch shows the connectors of the rinse aid sensor on the electrical card.

From the component:



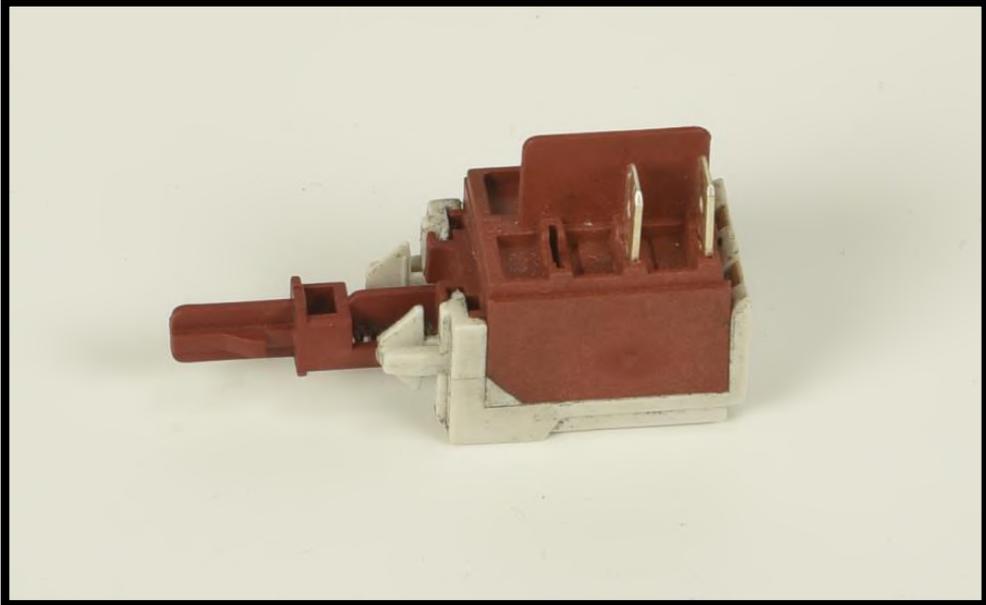
Probes of the tester should be applied on to the relatde connectors as shown on the pictures.

# ON/OFF SWITCH

It can't be measured from the electrical card.

	C	T	
DOOR SWITCH	CN2.9 - CN2.2 0Ω	KN2.8 - KN2.10 0Ω	Door is close

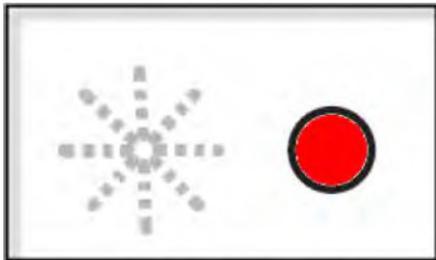
From the component:



# Poor drying

- a) The programme which hasn't got a drying phase; could be selected the customers should be informed about the programmes.
- b) there might be lack of rinse aid compartment.

FYAA23, FNAA15 have rinse aid indicator on the control panel.



**There isn't any rinse aid**



**there is rinse aid**

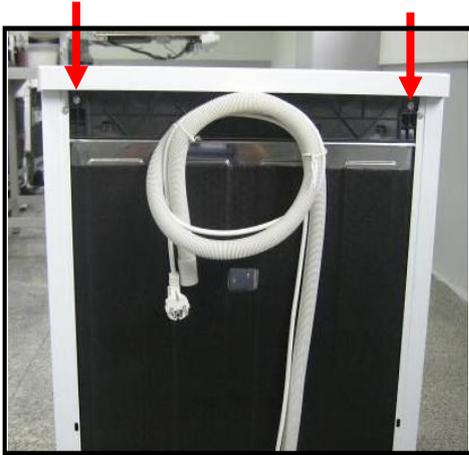
- c) There can be mechanical or electrical problem with the detergent dispenser.
- d) There can be a problem on the PCB card.

# DISASSEMBLY

**CAUTION!:** REMOVE ELECTRIC PLUG FROM THE SOCKET DURING THE DISASSEMBLY

## Top Plate

- a) Remove two screws that fix the top plate at the back.
- b) Push the top-plate back and pull it up.



## Plastic Kick Plate

- a) Remove two screws fixing plastic kick plate.



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



## Side panels

Remove the screws fixing side panels

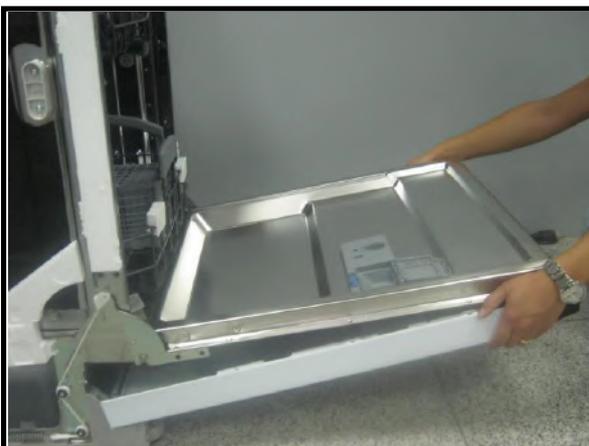


## Front Panel

a) Remove the screws as it shown in the picture.



b) Pull down the front panel after removing the screws.



## Kick Plate Sheet Iron

- a) Remove top plate, plastic kick plate and side panels.
- b) Remove the screws (4 screws) that fix the kick plate sheet iron.
- c) Pull it down as shown in the picture.

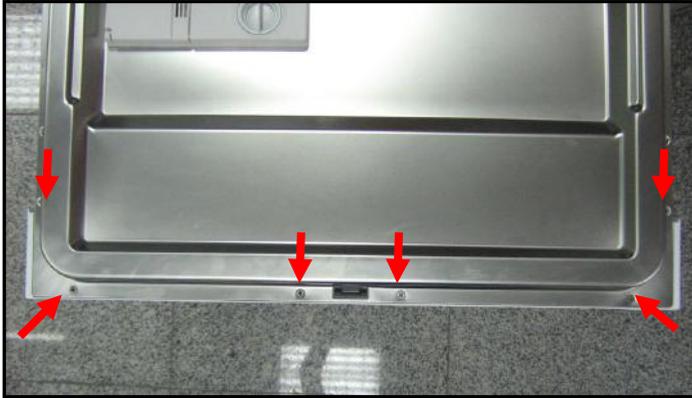


- To remove the side panel, remove the upper plastic hinge and then the above one and pull it up.

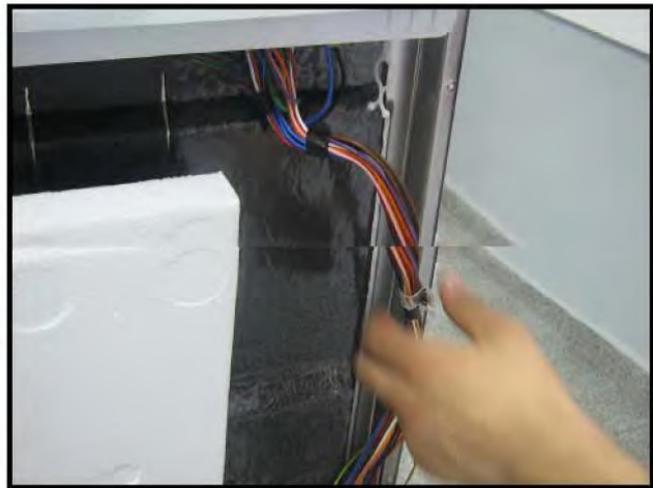


## Control Panel

- a) Remove 6 screws that fix control panel to the door inside sheet iron.
- b) Remove the control panel group carefully as shown in the picture



- c) Remove the cable connection plastic which fix cable harness to the control panel as shown in the picture.
- d) Remove the wires that are connected to control panel group.

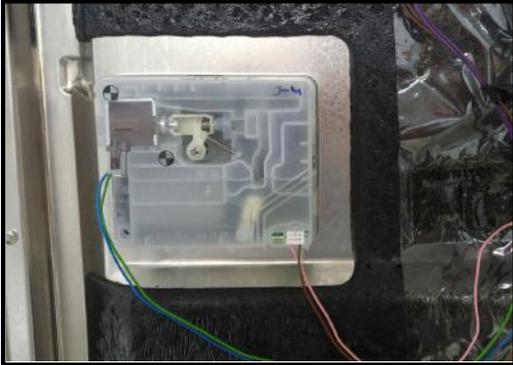


## Door Lock Group



- Remove control panel group
- Remove two screws that fix the door lock group.

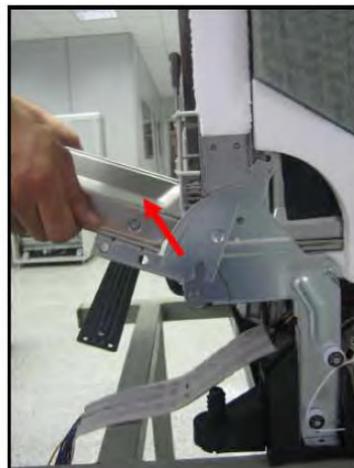
## Dispenser



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

## Door Inside

- a) Remove side panels.
- b) Remove Built-in Hinge Spring.



- c) Pull the door inside up as It is shown in the picture.
- d) Remove two screws that fix hinge movement sheet iron to the door inside.



## Air - break



a) Remove the left side panel of the machine.

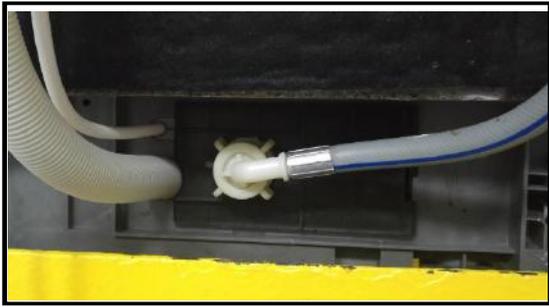
b) Open machine's door

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)



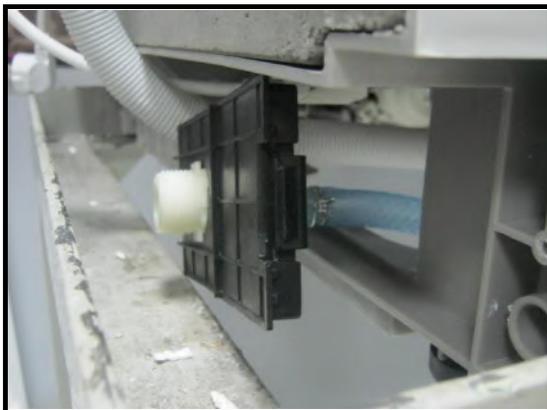
## Hose connection plastic



a) Remove left side panel.



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.

## Power cord

- a) Remove hose connection plastic.



- b) Remove the lower cover.
- c) Remove the wires that is between power cord and parasite filter.
- d) Remove the power cord.



## To access the components from in Front of the Machine



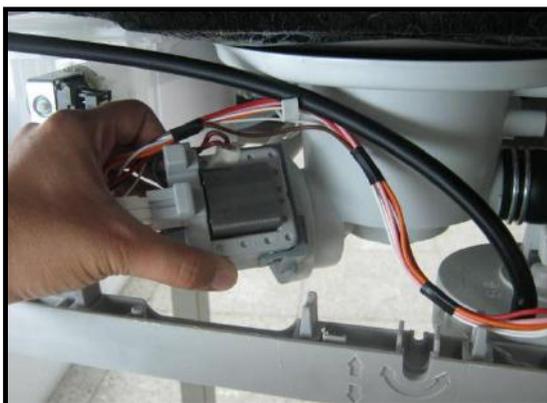
- a) Remove plastic kick plate iron sheet and basement front cover

## Regeneration valve



- a) Remove plastic kick plate and kick plate iron sheet.
- b) Remove the wires
- c) To remove regeneration Value rotate counterclockwise and pull it as it is shown in the picture.

## Drain pump



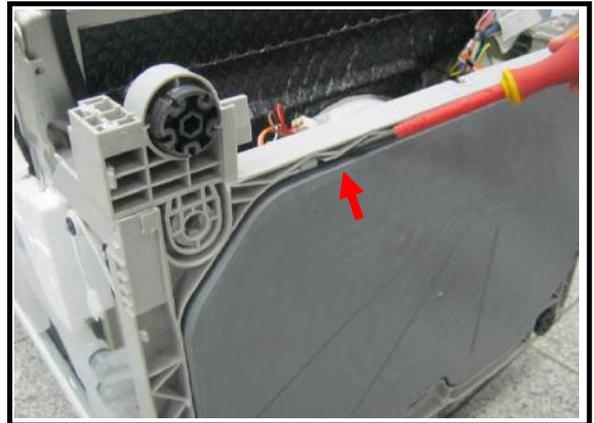
- a) Remove plastic kick plate and kick plate iron sheet
- b) Remove the wires.
- c) To remove the drain pump that fixes to the sump, rotate it in the direction of counterclockwise and pull.

## Access the components from the lower cover

a) Lay the appliance on the rear panel.

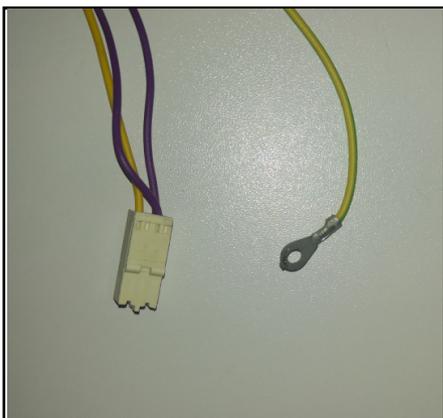


b) Remove lower cover from the places that are shown in the picture.



## Circulation pump

a) Remove lower cover from the places and measure the component.



## 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.

d) Derach 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.



## Parasite filter



a) Remove lower cover.

b) Remove one screw fixing parasite filter.

c) Remove wires.

d) Push parasite filter and remove it.

## Floater



a) Remove lower cover.



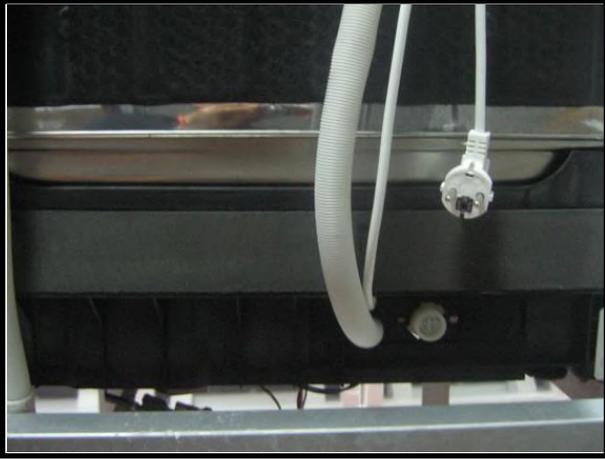
b) Remove two screws that fix floater as it is shown in the picture.



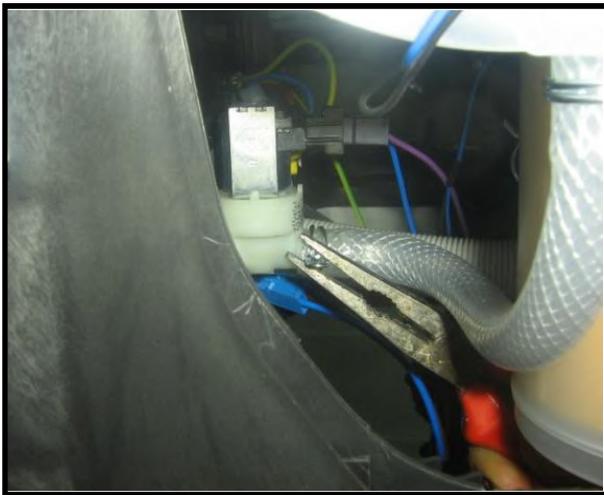
c) Remove the two floater hoses.

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

## Water Inlet valve



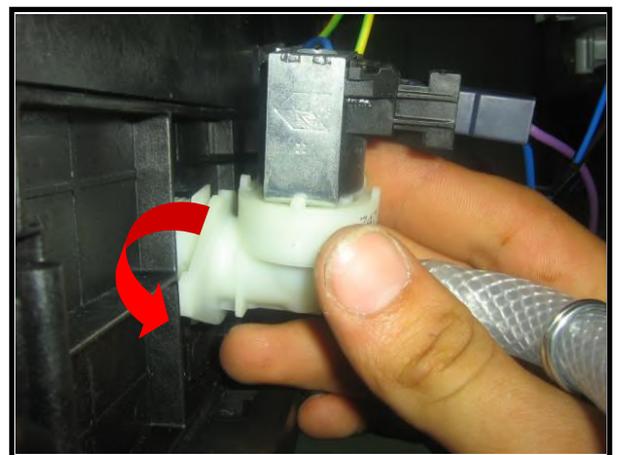
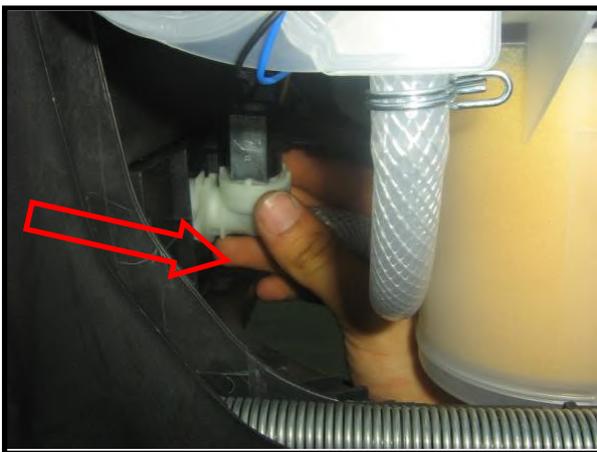
a) Remove lower cover.



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

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 connecte to and rotate it in the direction of counterclockwise.



## Draining hose



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

## Lower basket



- a) Open machine's door.
- b) Pull the basket to yourself.

## Upper basket



- a) Open upper basket rail lock front.
- b) Pull the basket to yourself and remove it.



## The components that are inside the tub course, micro and metal filters

- a) Open the door.
- b) Remove lower basket
- c) To remove microfilter group rotate them in the direction of counter clockwise and pull them up as it is shown in the picture



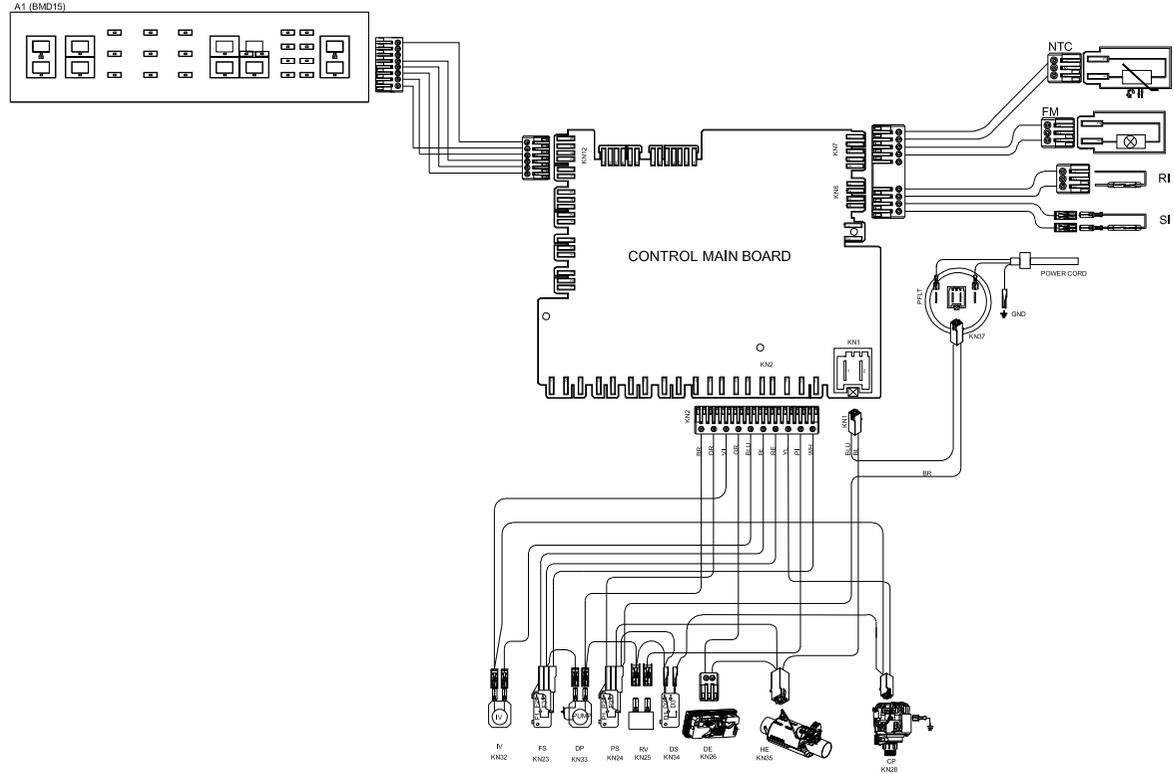
- d) To remove microfilter group (course filter and micro filter ) pull them as it is shown in the picture.



- e) To remove the metal filter pull it up as it shown in the picture.



DO NOT SCALE DRAWING  
RESİM ÜZERİNDEN ÖLÇÜ ALMAYINIZ



TS	TURBIDITY SENSOR
RI	RINSE INDICATOR
SI	SALT INDICATOR
FM	FLOWMETER
NTC	NTC SENSOR
DV	DIVERTER
IV	INLET VALVE
FS	FLOAT SENSOR
DP	DRAIN PUMP
TF	TURBO FAN
PS	PRESSURE SWITCH
DS	DOOR SWITCH
DE	AC DISPENSER
HE	HEATING ELEMENT
CP	CIRCULATION PUMP
C	CAPASITOR
RV	REGENERATION VALVE
SF	HEATING SAFETY
RW	ROTARY SWITCH
BLDC	BLOOD PUMP
PST	POWER SUPPLY TERMINAL
MS	MAIN SWITCH
DUB	DISPLAY AND USER BOARD
LUX	DISPLAY END USER BOARD
U2X	DISPLAY END USER BOARD
U3X	DISPLAY END USER BOARD
SEL	SAFETY LOCK
LM	LIGHT MODULE
DCD	DC DISPENSER
ALM	ALIMENT LIGHT MODULE
PSN	PRESSURE LEVEL SWITCH
VHS	WATER HARDNESS SENSOR
CULCD	CONTROL UNIT LCD
ATSW	AUTOMATIC ON OFF SWITCH
LCD	LIQUID CRYSTAL DISPLAY
PFLT	PARASIT FILTER
TRF	TRANSFORMER LIGHT MODULE
ALL	AMBIENT LIGHT LED
AOD	AUTOMATIC OPEN DOOR
TFT	TFT LCD
FC	FERRIT CORE
WRV	WATER RECYCLING VALF
WRP	WATER RECYCLING PUMP
SC	SILICON CABLE
HPP	HEATER INTEGRATED PUMP

Component / materials used in component / materials must be in compliance with RoHS directive 2002/95/EC (on the restriction of the use of certain hazardous substances in electrical and electronic equipment)  
Komponent / Komponent içinde kullanılan materyaller / Matzemeler RoHS 2002/95/EC direktifine (elektrik elektronik ekipmanlarında tehlikeli maddelerin kullanımının kısıtlanması) uygun olmalıdır.

Apply the required revisions on other related parts by locating through BOM lists  
Diğer ilgili birimlerdeki parçaların gereği değişiklikler yapılmalıdır

REV NO	NAME/ADI-SOYADI	SIGNATURE/İMZA	DATE/TARİH	CHANGES DEĞİŞİMLER	CHANGE DATE DEĞİŞİMLER TARİHİ	CHANGED BY DEĞİŞİMLER YAPAN	CHECKED BY KONTROL EDEN	APPROVED BY ONAYLAYAN
A	Özgün ARSLAN		26.03.2019					
1-6	± 01	Murat ÇERDİK	26.03.2019					
6-30	± 02	Evren BAL	26.03.2019					
30-100	± 03							
100-300	± 05							
300-600	± 06							
600-1000	± 08							
1000-2000	± 12							
ANGLE/ACI	± 150°							

VESTEL

BEVAZ EŞYA SAN. VE TİC. A.Ş.  
MANİSA/TURKİYE

ISSUE NO: -  
TAYIN NO: -

ISSUE DATE: -  
TAYIN TARİHİ: -

SHEET/SAYFA: -  
INITIAL/TAMAMI: -

MODEL NAME: -  
DIRECTORY: -

ALL RIGHTS RESERVED. REPRODUCTION OR RESALE OF THIS DOCUMENT WITHOUT WRITTEN AUTHORITY FROM VESTEL IS PROHIBITED.  
TÜM HAKLARI KORUNMUŞTUR. BİRİNCİLİK İZİNİNSİZ BU BELGEYİ KOPYALAMAK VE YAYINLAMAK YASAKTIR.

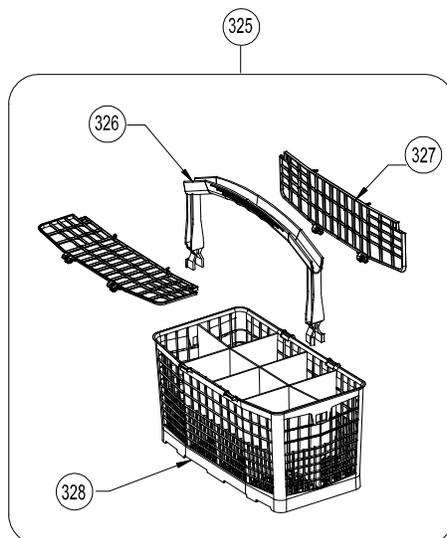
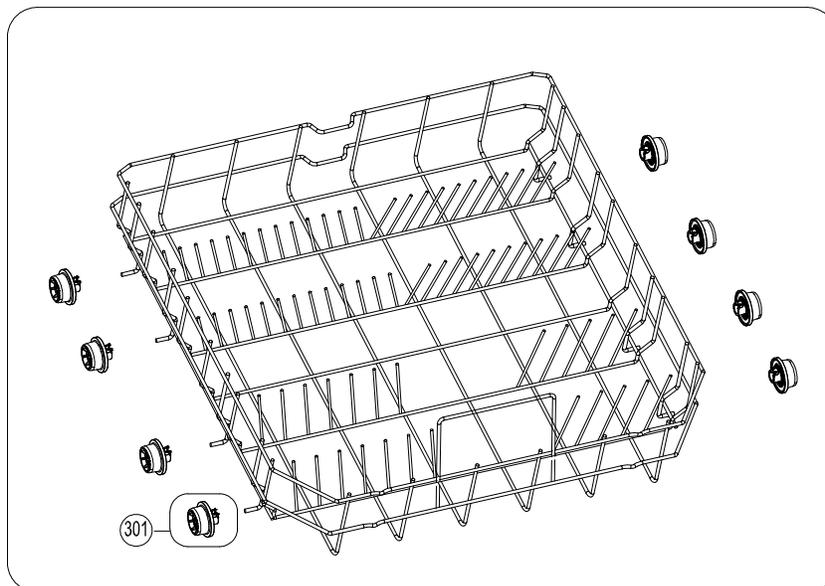
# VESTEL

WHITE GOODS

VESTEL DISWASHER MACH .

LOWER BASKET GROUP

CUSTOMER  
SUPPORT



NO	PART NAME
300	LOWER BASKET GROUP - FIXED COMB - (301)
301	LOWER BASKET WHEEL GROUP
325	PLASTIC SET BASKET ( 326-327-328 )
326	PLASTIC BASKET HANDLE
327	PLASTIC BASKET COVER
328	PLASTIC BASKET

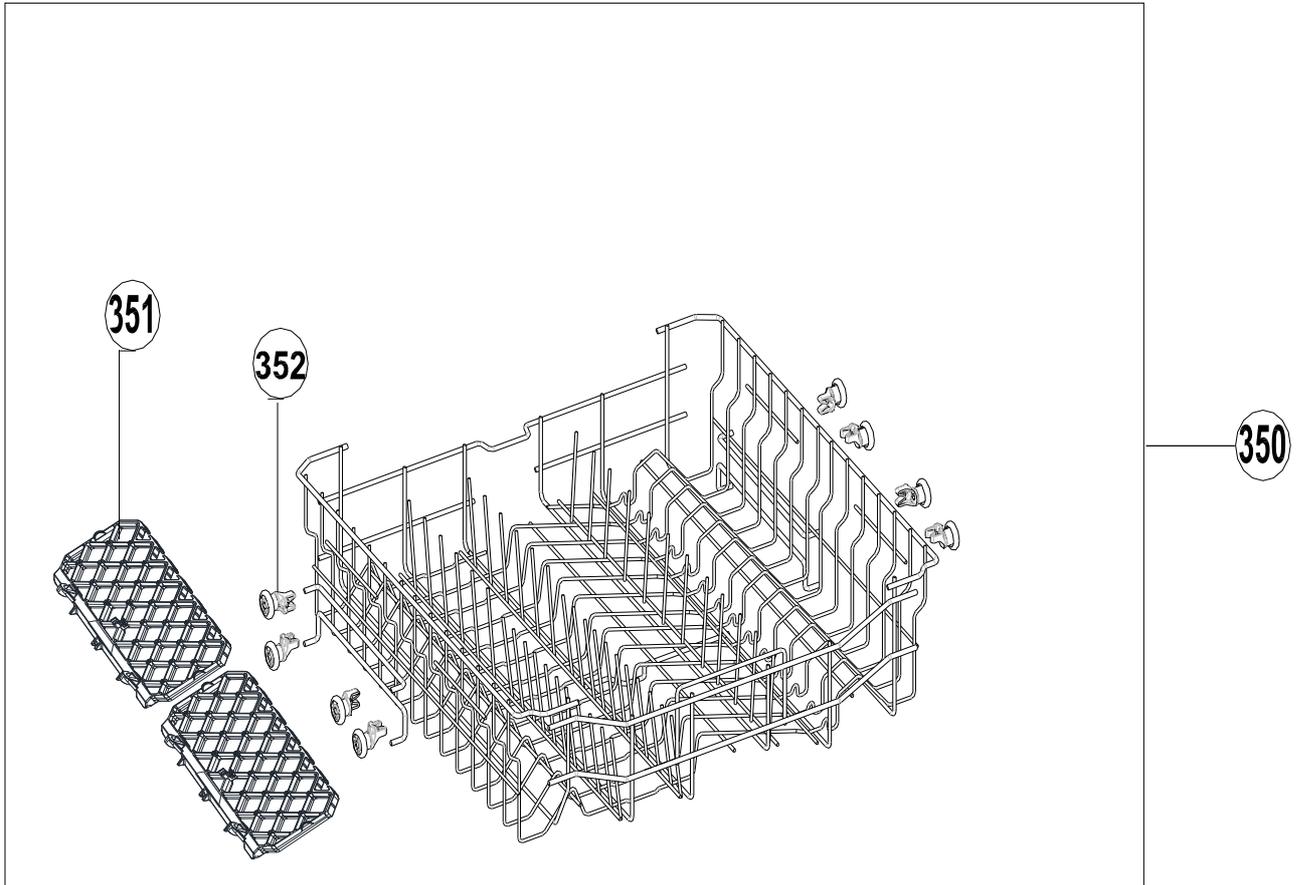
MAY 2018

**VESTEL**  
WHITE GOODS

VESTEL DISWASHER MACH .

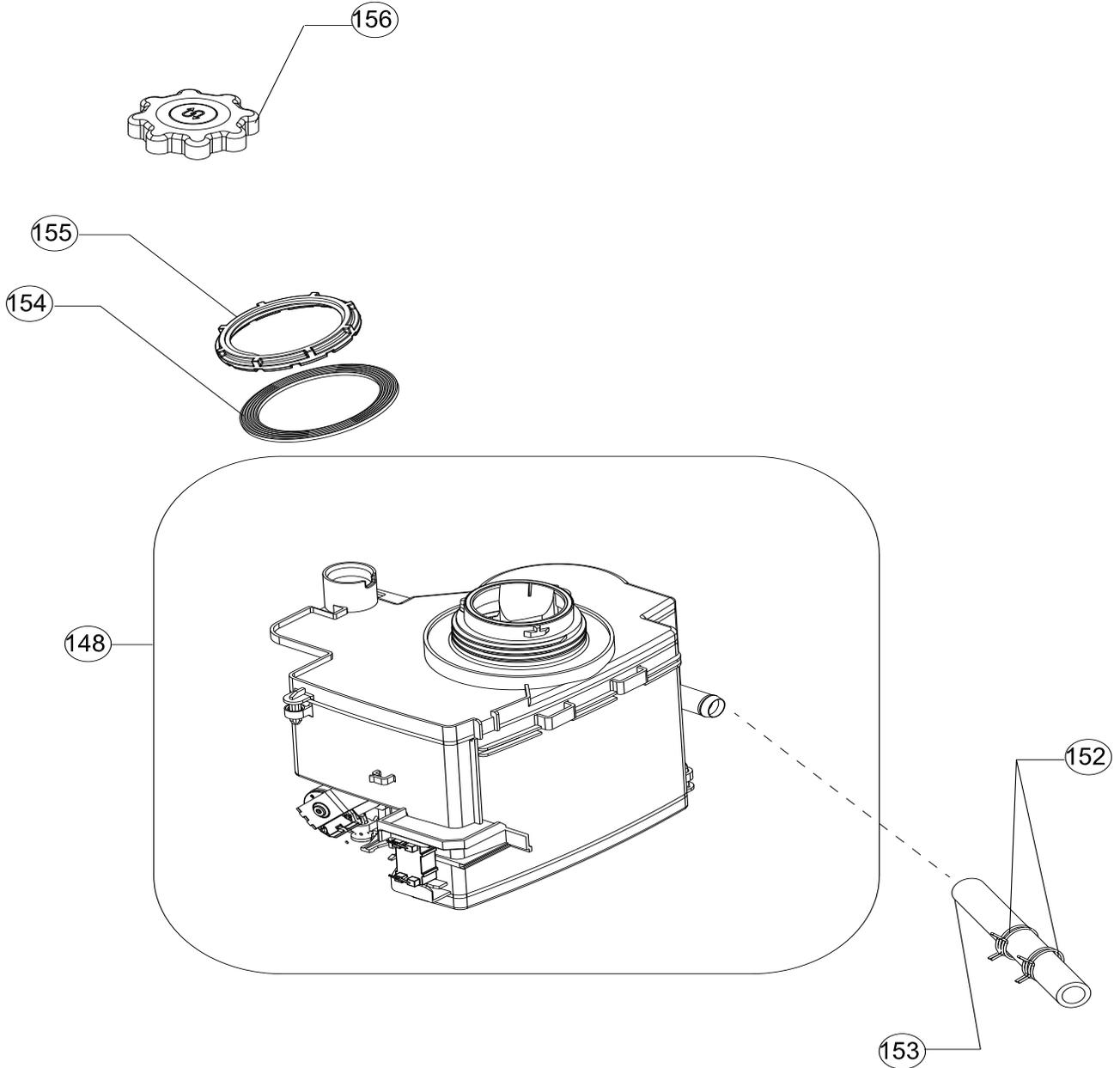
UPPER BASKET GROUP

CUSTOMER  
SUPPORT

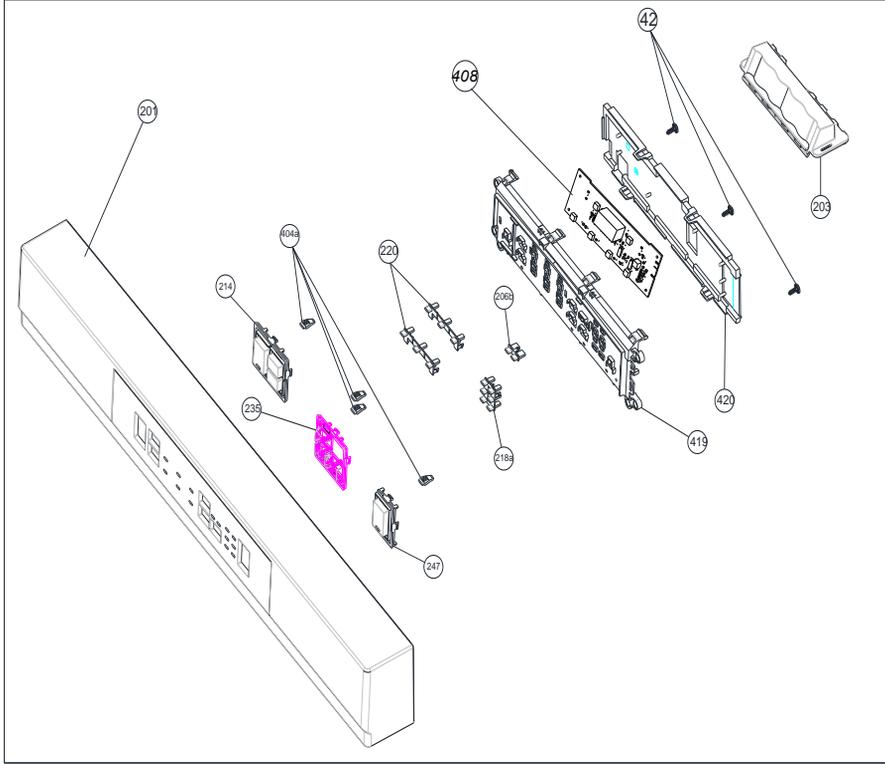


NO	PART NAME
350	UPPER BASKET GR. (351-352)
351	MUG SHELF
352	UPPER BASKET WHEEL GR-2

MAY 2018



NO	PART NAME
148	WATER SOFTENER GR.WITH REED RELAY
152	CLAMP Dmax19,6X8,8
153	HOSE D12*3*160
154	WATER SOFTENER NUT GASKET
155	WATER SOFTENER NUT
156	SALT CAP GROUP (MAGNETIC VERSION)



NO	PART NAME
200	CON.PAN.GR/T13 CLAROS
201	CONTROL PANEL/ANGEL/H.KDS
203	HANDLE/ANGEL
235	OPSİYON BUTON/ANGEL/A1
247	START/PAUSE BUTON/ANGEL/A1
214	ON/OFF BUTON/ANGEL/A1
404a	BUTON LIGHTGUIDE/ANGEL
220	LIGHTGUIDE/PRG/ANEMON/A1-A2 3LÜ
218a	LIGHTGUIDE/OPSİYON/ANGEL/A1
206b	LIGHTGUIDE/DELAY/ANGEL/A1
408	DISPLAY CARD
419	DISPLAY BOX/ANGEL/A1
420	DISPLAY COVER/ANGEL
42	SCREW PT3.5X9 YSB

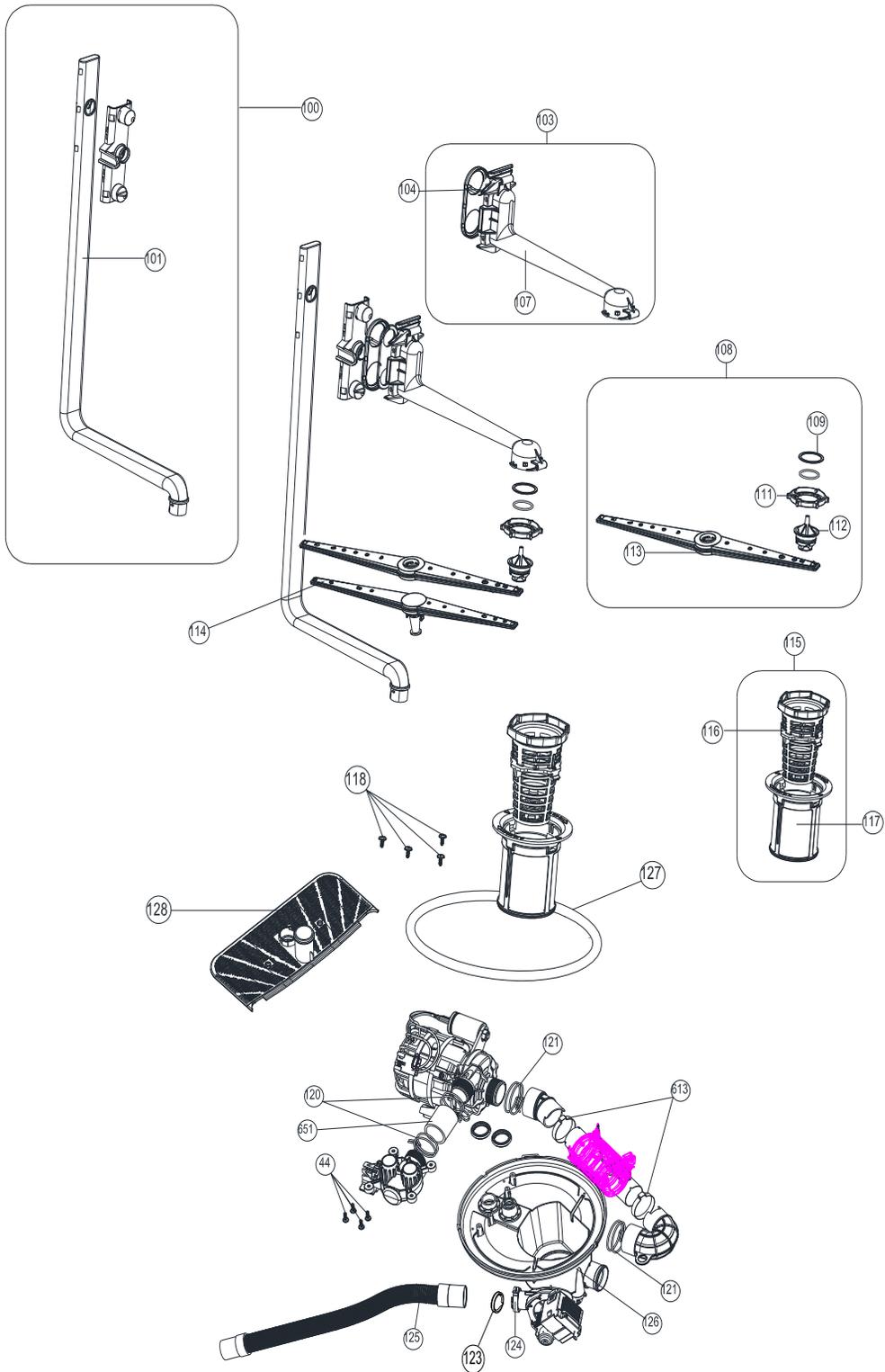
**VESTEL**

WHITE GOODS

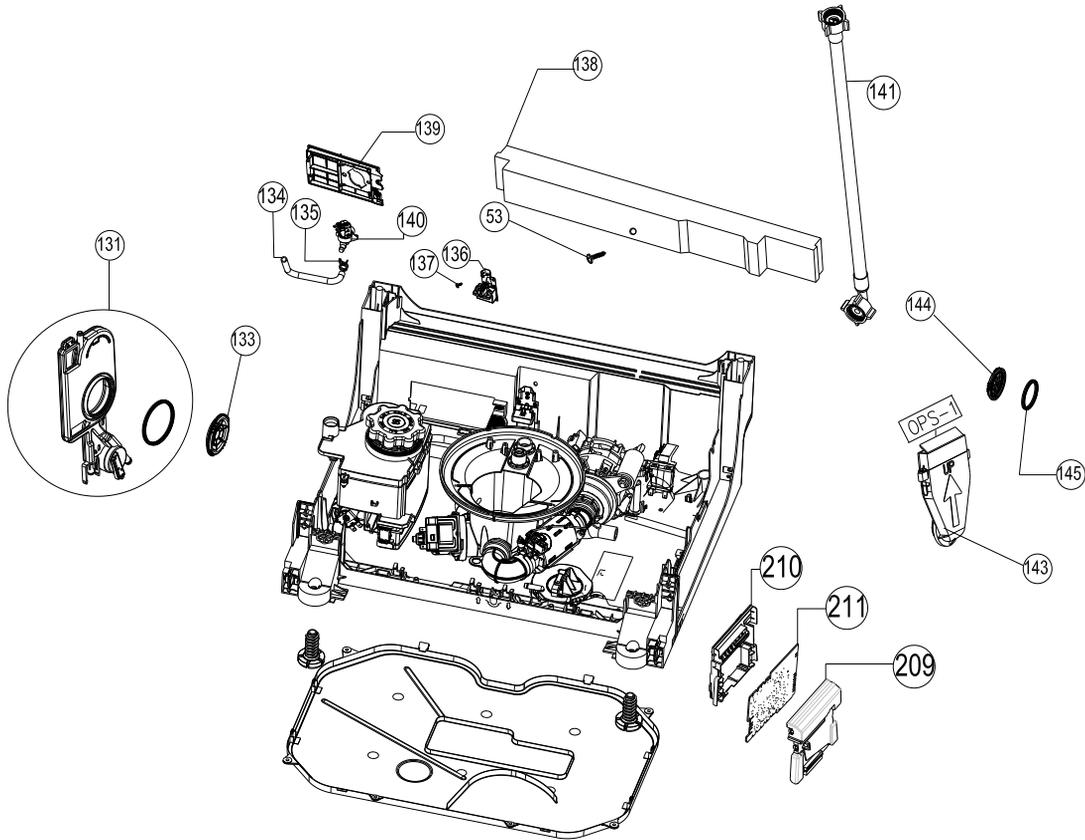
VESTEL DISWASHER MACH .

UPPER HYDROLIC GROUP

CUSTOMER  
SUPPORT



NO	PART NAME
100	<b>UPPER SPRAY ARM FEEDING CANAL-L GR</b>
101	UPPER SPRAY ARM FEEDING CANAL-L
103	<b>UPPER SPRAY ARM SUPPORT GROUP ( 104-107 )</b>
104	UPPER SPRAY ARM ADAPTER COVER
107	UPPER SPRAY ARM SUPPORT
108	<b>UPPER SPRAY ARM GROUP(113-112-111-110-109)</b>
109	UPPER SPRAY ARM NUT PLASTIC
111	UPPER SPRAY ARM NUT
112	UPPER SPRAY ARM SHAFT WITHOUT O-RING
113	UPPER SPRAY ARM
114	LOWER SPRAY ARM
115	<b>MICROFILTER GROUP ( 116-117 )</b>
116	COURSE FILTER
117	MICROFILTER
118	SCREW PT4X12 YSB INOX
120	CLAMP Dmax36,4X14
121	CLAMP Dmax41X14,8
126a	<b>SUMP GR/AUSTRALIA/FT/ECO (126-76-123-152-153-44-175-197)</b>
44	SCREWPT4X12YSB
123	KLAPE
126	SUMP
124	HOSE HANDCUFFS D30
125	DRAIN HOSE 200 CM
127	SUMP SEAL
128	SPRAY ARM SUPPORT
651	HOSE D28,5*3*38,5(MOT-ECO)/45/FT



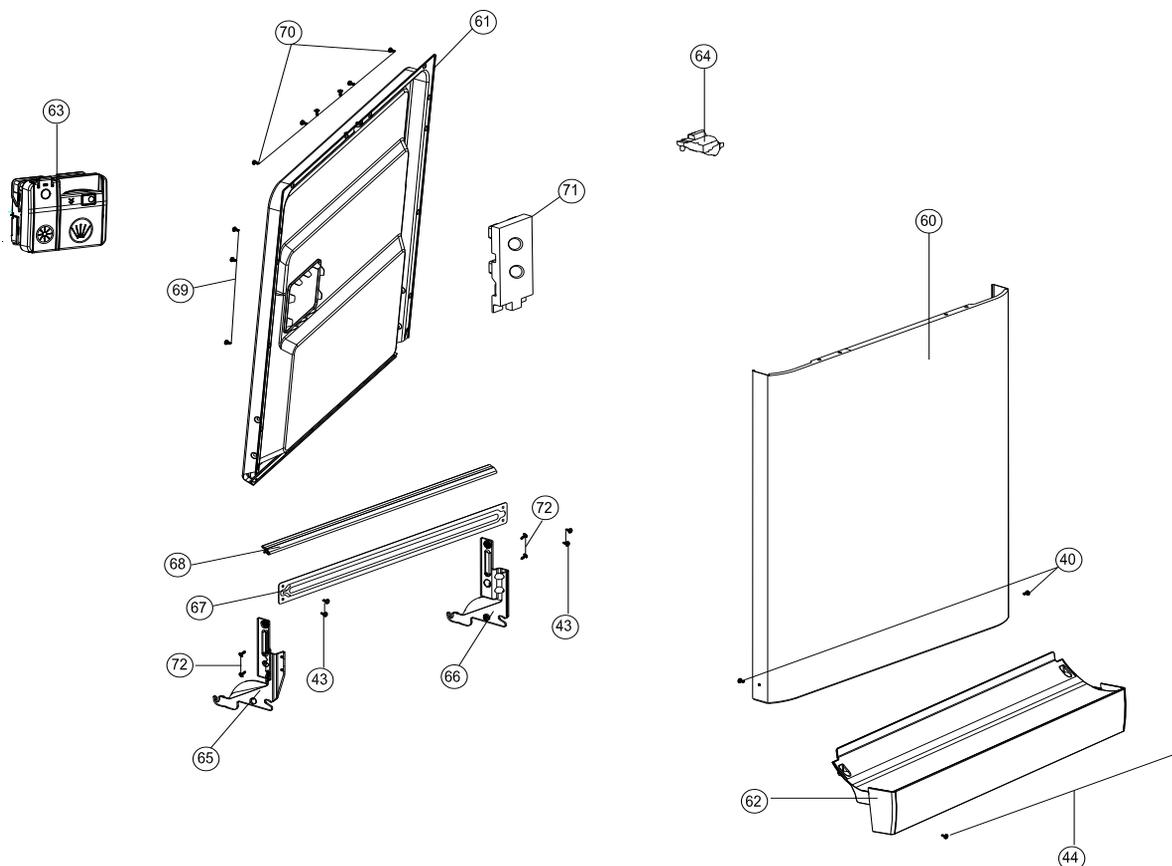
NO	PART NAME
131	AIR BREAK GROUP
133	AIR BREAK NUT
134	HOSE D10*3*230
135	CLAMP Dmax16,8x8,4
136	PARASITE FILTE
137	SCREW PT3X9 YSB
138	CONCRETE WEIGHT
139	BASEMENT HOSE.CON.PLS.
140a	WATER INLET VALVE GR (140-139-135-134)
140	WATER INLET VALVE
141	WATER INLET VALVE HOSE
143	STEAM CONDERSER (PLEASE ORDER THE SPARE PART WHICH IS USED IN YOUR MACHINE)
144	STEAM CONDERSER NUT
145	STEAM CONDERSER SEALING GASKET
209	PCB BOX
210	PCB BOX COVER
211	ELECT. CARD
53	SCREW 4X42,5 YHB

**VESTEL**

WHITE GOODS

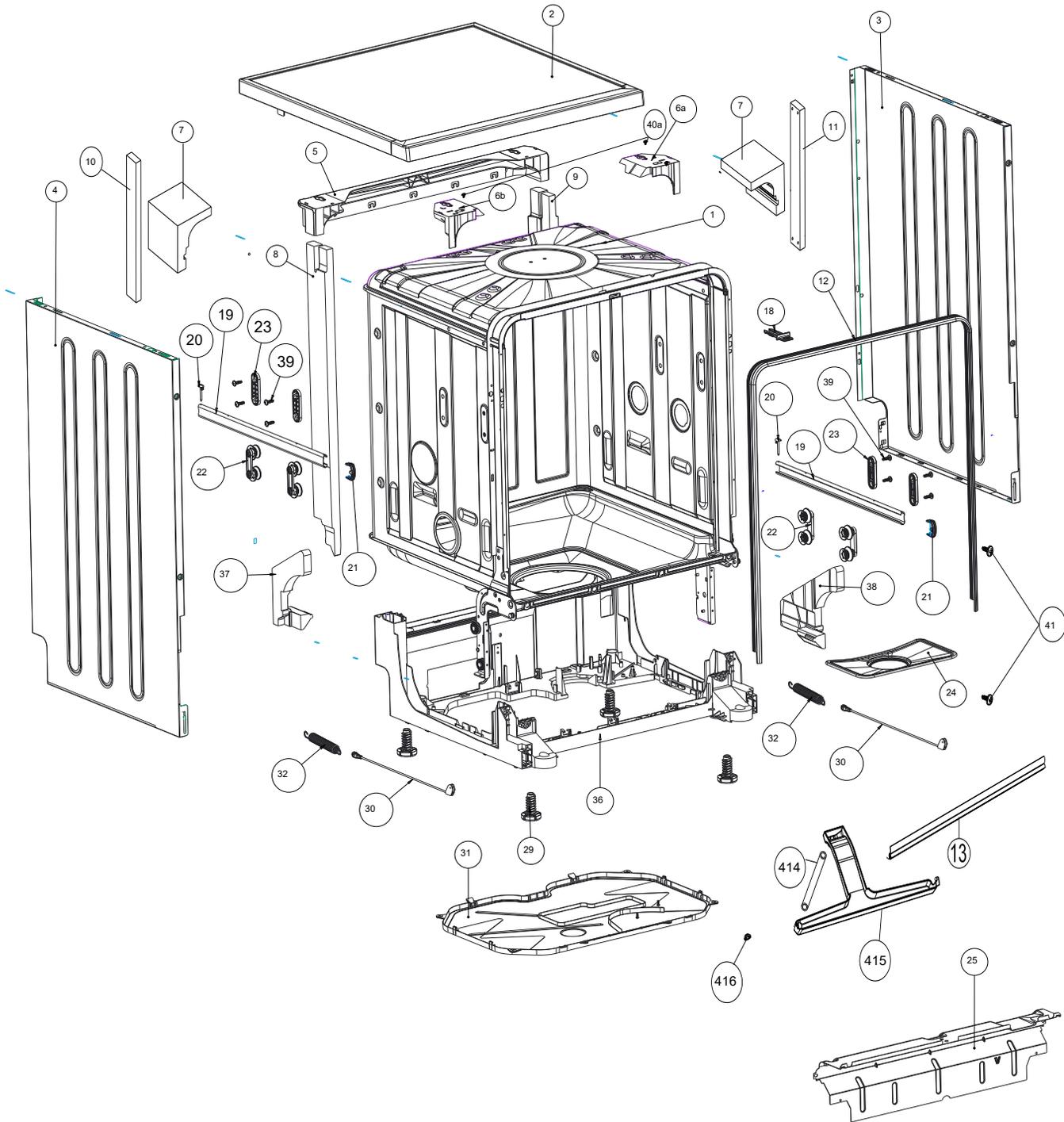
VESTEL DISWASHER MACH .

DOOR GROUP

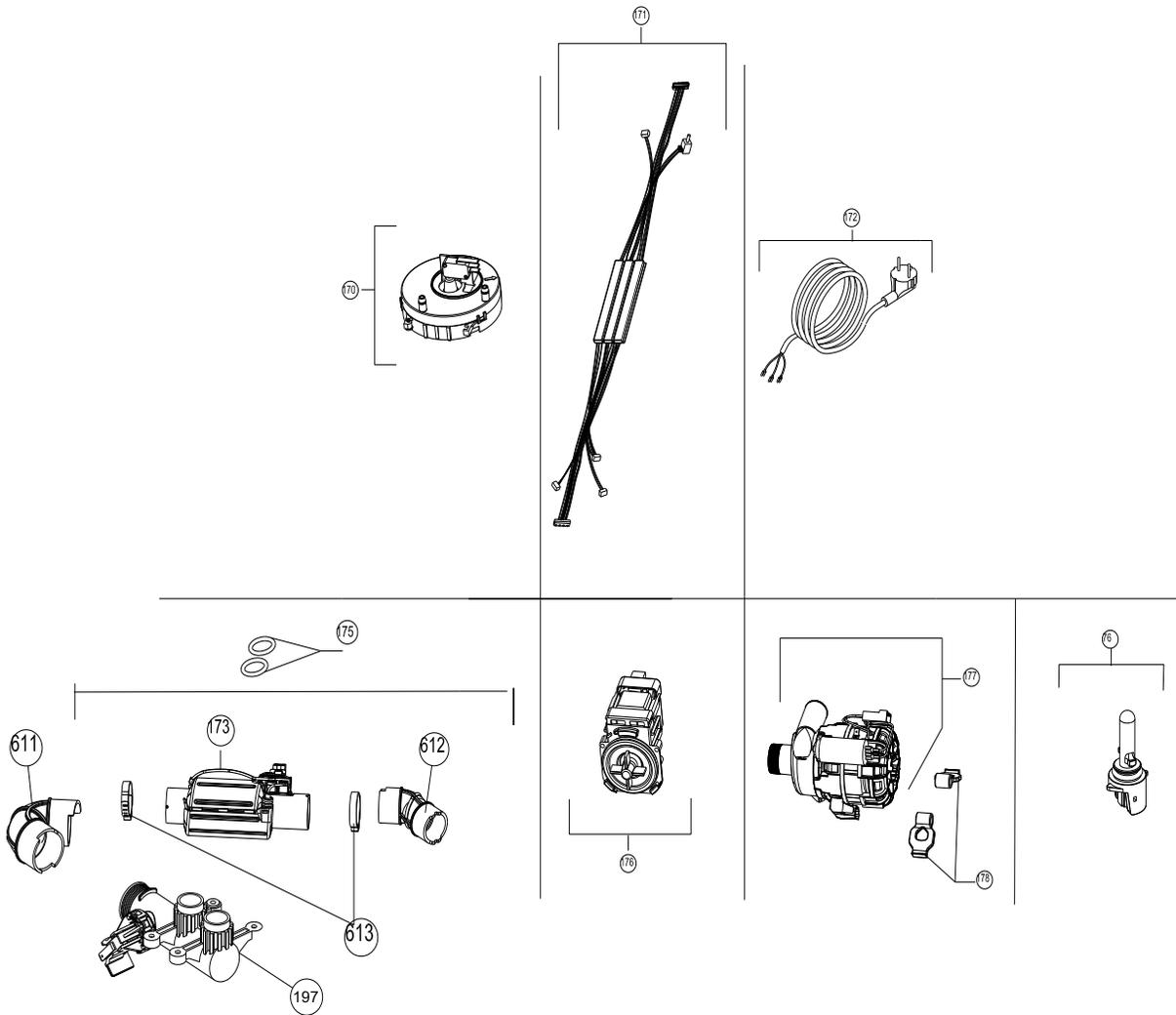
CUSTOMER  
SUPPORT

NO	PART NAME
60	DOOR OUTSIDE
61	INNER DOOR-YD ASSEMBLY-2(NVS)
62	PLASTIC KICK PLATE
63	SLIDE DISPANSER WITH
64	DOOR LOCK
65	HINGE MOVEMENT SHEETIRON LEFT
66	HINGE MOVEMENT SHEETIRON RIGHT
67	HINGE PART BRACKET 2(60)600*0,5*45
68	DOOR SEAL
69	SCREW ST 3,9X12 FLAT HEAD INOX
70	SCREW PT4X14 FLAT HEAD INOX
71	DOOR SUPPORT STYROFOAM
72	SCREW M5X10 TORK HEAD (S)
40	SCREW M4X6 PAN HEAD SPIRAL (WHITE)
43	SCREW M4X10 YSB SPIRAL
44	SCREW PT 4X12 PAN HEAD COLLAR CROSS

MAY 2018



NO	PART NAME
1	TUBE ASSEMBLY
2	UPPER TRAY GROUP
3	FLAT/SIDE PANEL SHEETIRON-RIGHT
4	FLAT/SIDE PANEL SHEETIRON-LEFT
5	REAR UPPER PLS.CROSS BAR
6a	UPPER TRAY SUPPORT PART/RIGHT
6b	UPPER TRAY SUPPORT PART - LEFT
7	TUB TOP CORNER STYROFOAM
8	BACK CROSS BAR STYROFOAM-LEFT
9	BACK CROSS BAR STYROFOAM-RIGHT
10	FRONT CROSS BAR STYROFOAM-LEFT(ND)
11	FRONT CROSS BAR STYROFOAM-RIGHT(ND)
12	TUB GASKET
13	TOP TUB OF GASKET/GREY-2
18	LATCH DOOR
19	UPPER BASKET RAIL
20	UPPER BASKET STOPPER-REAR
21	UPPER BASKET RAIL LOCK-FRONT
22	UPPER BASKET RAIL CON.BRA.GROUP
23	UPPER BASKET RAIL CON.BRA -REAR
24	METAL FILTER-2
25	KICKPLATE SHEETIRON
29	ADJUSTABLE FOOT
30	HINGE CORD GROUP
31	LOWER COVER
32	HINGE SPRING
36	BASEMENT GR/SOLO-2
37	TUB LOWER CORNER STYROFOAM-LEFT
38	TUB LOWER CORNER STYROFOAM-RIGHT
39	SCREW PT5X20 TORX WITH RONDELA
40a	*SCREW M4X6 YSB SPIRAL
41	SCREW ST 3.9X9.5 PAN HEAD (S)
414	OVERFLOW PLASTIC HOSE/PVC/UNSTRUNG
415	OVERFLOW PLASTIC
416	BOTTOM TUB OVERFLOW GASKET



NO	PART NAME
170	FLOATER
171	CABLE HARNESS
172	POWER CABLE 180cm/WHITE
173	HEATER FLOW THROUGH
175	HEATER CASING O-RING
176	DRAIN PUMP
177	WASHING PUMP
178	WASHING PUMP VINE SUPPORT
76	NTC/SLIM
611	HOSE HEATER-ECO
612	HOSE PUMP-HEATER
613	HOSE HANDCUFFS/FLOW THROUGH
197	ECO GR/FT

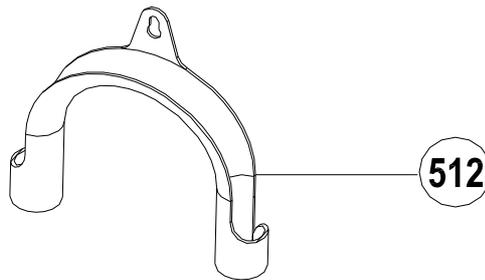
**VESTEL**

WHITE GOODS

VESTEL DISWASHER MACH .

OPTIONAL PARTS

CUSTOMER  
SUPPORT



NO	PART NAME
512	DRAIN HOSE COAT RACK

MAY 2018

POSICION	CODIGO	DESCRIPCION
177	32032274	WASHING PUMP DDW-V13A1EW/EG/15W
173	32033150	HEATER 1800W DDW-V13A1EW/EG/15W
61	22041293	INNER DOOR DDW-V13A1EW/EG/15W
136	32030188	PARASITE FILTER 2200pF DDW-V13A1EW/EG/15
140a	32029268	WATER INLET VALVE DDW-V13A1EW/EG/15W
350	37008370	UPPER BASKET DDW-V13A1EW/EG/15W
32	37019789	HINGE SPRING DDW-V13A1EW/EG/15W
24	37027225	METAL FILTER DDW-V13A1EW/EG/15W
300	37030190	LOWER BASKET DDW-V13A1EW/EG/15W
141	42005932	WATER INLET HOSE DDW-V13A1EW/EG/15W
125	42005936	DRAIN HOSE DDW-V13A1EW/EG/15W
127	42005959	SUMP SEAL DDW-V13A1EW/EG/15W
155	42020656	WATER SOFTENER NUT DDW-V13A1EW/EG/15W
133	42020657	AIR BREAK NUT DDW-V13A1EW/EG/15W
20	42021919	UPPER BASKET STOPPE DDW-V13A1EW/EG/15W
100	42030350	UPPER SPRAYARM DDW-V13A1EW/EG/15W
115	42035214	*MICROFILTER DDW-V13A1EW/EG/15W
144	42051789	ACTIVE/CONDERSER DDW-V13A1EW/EG/15W6
68	42064225	DOOR SEAL DDW-V13A1EW/EG/15W
415	42114321	OVERFLOW DDW-V13A1EW/EG/15W
18	42119852	DOOR HOOK DDW-V13A1EW/EG/15W
148	42134284	WATER SOFTENER DDW-V13A1EW/EG/15W
60	20853333	FRONT PANEL DDW-V13A1EW/15W
2	42073032	UPPER TRAY GR DDW-V13A1EW/15W
211	22107254	ELEC.CARD (DDW-V13A15W)
200	42201455	CON.PAN.GR.SRGF(DDW-V13A15W)
36	42188772	BASEMENT DDW-V13A1EW/EG/15W
154	42008725	WTR SOFT NUT GKET DDW-V13A1EW/EG/15W
325	42173972	SET BASKET DDW-V13A1EW/EG/15W
176	32026853	DRAIN PUMP DDW-V13A1EW/EG/15W
64	32013875	DOOR LOCK DDW-V13A1EW/EG/15W
63	42173012	SLIDE DISPANSER DDW-V13A1EW/EG/15W
126a	42170573	SUMP GR/60/ DDW-V13A1EW/EG/15W
611	42158952	HOSE HEATER-SUMP DDW-V13A1EW/EG/15W
612	42158951	HOSE MOTR-HEATER DDW-V13A1EW/EG/15W
22	42156306	UPPER BASKET RAIL DDW-V13A1EW/EG/15W
13	42154527	TOP TUB OF GASKET DDW-V13A1EW/EG/15W
131	42153776	COMPACT AIR BREAK DDW-V13A1EW/EG/15W
108	42153409	UPPER SPRAY ARM DDW-V13A1EW/EG/15W
128	42152119	SPRAY ARM SUPPORT DDW-V13A1EW/EG/15W
114	42151581	LOWER SPRAY DDW-V13A1EW/EG/15W
21	42137271	UP BSKET RAIL LOCK DDW-V13A1EW/EG/15W
156	42134326	SALT CAP GR DDW-V13A1EW/EG/15W