Service Manual

for

BLDC Pyrojet Series

Table of Contents

1. Safety Precautions 4
2. Specifications 5
3. Assambly Information 5
4. Control Panel and Acronyms 7
5. Test Mode 8
   5.1. Autotest 8
   5.2. Program Parameters 8
6. Service Mode 10
   6.1. Service Autotest 10
   6.2. Failure Codes 11
7. Critical Torque Values 11
8. Disassembly and Assembly Instructions 12
   8.1. Top Plate 12
   8.2. Door 12
   8.3. Spring Wire 13
   8.4. Detergent Drawer 13
   8.5. Control Panel 13
   8.6. Electronic Card & Fuse 14
   8.7. Front Panel 15
   8.8. Support Bracket 16
   8.9. Detergent Drawer Housing 16
   8.10. Power Cable Group and EMI Filter 17
   8.11. Electronic Pressure Switch (EPS) 17
   8.12. Door Lock* 18
   8.13. Pyrojet Card 18
   8.14. Drain Pump 18
   8.15. Front Counterweight* 18
   8.16. Heater 19
   8.17. Pyrojet System 19
   8.18. Twinjet System* 20
   8.19. Tub Bellow Seal* 21
   8.20. Transport Screw 21
   8.21. Upper Counterweight* 21
   8.22. Washing Group 22
   8.23. Shock Absorber Pin 22
   8.24. Driven Pulley 22
   8.25. Driven Pulley 22
   8.26. Motor 23
   8.27. Tub 23
   8.28. BLDC card 23
9. Component Specifications 26
   9.1. Drain Pump 26
   9.2. Circulation Pump* 27
   9.3. Heater 28
   9.4. NTC 29
   9.5. Valve 30
   9.6. Electronic Pressure Sensor (EPS)* 31
   9.7. Motor 32
   9.8. Door Lock* 33
   9.9. Pyrojet* 34
10. Wiring Diagram* 35

About Content

This service bulletin is prepared for all OEM products within FG range. Therefore you may encounter information about some optional components that may not exist in your product. As this is a generic service bulletin covering all range, please ignore and skip extra/optional component information. Sections marked with asterisk (*) sign contain information about optional components.

Information already exists in user manuals is not included in this service manual. Please refer to user manual of your product for basic installation, operating, maintenance and troubleshooting issues.

Contact

For your inquiries please send an email to:

WashingMachineCustomerSupport@vestel.com.tr

You can also open a support ticket using Service Support Page:

https://www.vestelservice.com/VestelService/

Acronyms:

WM	:	Washing Machine
WMCS	:	Washing Machine Customer Support
TJ	:	Twinjet
UI	:	User Interface
SI	:	Service Interface
A	:	Available
NA	:	Not Available

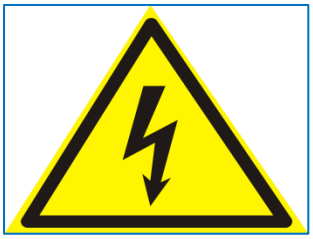
1. Safety Precautions

Important:

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Warning:

Before any disassembly/repair operation make sure appliance is unlplugged water tap is closed and heating elements are cooled down. There is electrical shock, burning and flood risk.



Warning:

Please replace whole cable group even in case there is any minor failure with cables / terminals / sockets. Never try to repair nor to solder cable group. It may cause smoke, ignition and there is major risk of electrical shock.

Important:

Always use insulator gloves to prevent injury by metal edges or to prevent electrical shock during electrical tests.

Work with uniforms having long sleeves to protect your arms from metal edges.

Always use original spare parts. You may harm appliance, end user, environment or yourself using untested and unapproved 3rd party spare parts.

Use right tools to prevent any wear or damage to components during assembly/disassembly.

2. Specifications

Here you will find descriptions of generic specifications for the range specified for this service manual. Please refer to product fiche and user manual for detailed technical specifications.

***Twinjet System:**

Twinjet system is designed to obtain a better washing performance by directly injecting water with detergent using a recirculation system and two nozzles connected to it. With twinjet system, water consumption is decreased by 30%, energy consumption is decreased by 10% and washing time is decreased by 15%

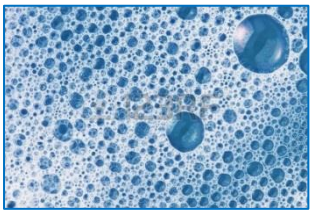
Twinjet system is valid for all programs except spin and drain mode. The system dos not function during Water inlet, heating, spinning, drain phases.

Even with a large load of 8 kg. the washing machine will have the minimum energy consumption by the help of Twinjet system.

Washing machines with Twinjet system are very environment-friendly by having maximum washing performance with minimum water consumption.

Eco-Logic System:

Half load detection system, thus using less water and power accordingly. This system is available for cotton programs only.

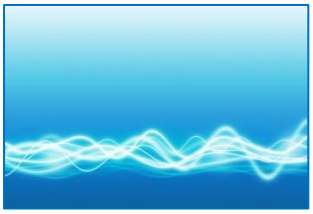


Foam Protection System:

Foam Protection System is a safety algorithm that interrupts normal program flow and reduces foam level by taking water and draining. This algorithm protects machine and environment avoiding over foaming inside tub in case any customer misuse such as detergent overdose or use of foamy cleaning agents.

Overflow Protection System:

Overflow protection is another safety algorithm in case of a flood risk. If there is more water in tub than expected by algorithm, it will start to the drain routine giving E04 failure code. For example this may happen in case of a valve failure and the machine constantly takes water. This algorithm will keep drain routine, keeps water leveled and protects environment and machine avoiding any flood risk.



Unbalanced Load Detection and Control System:

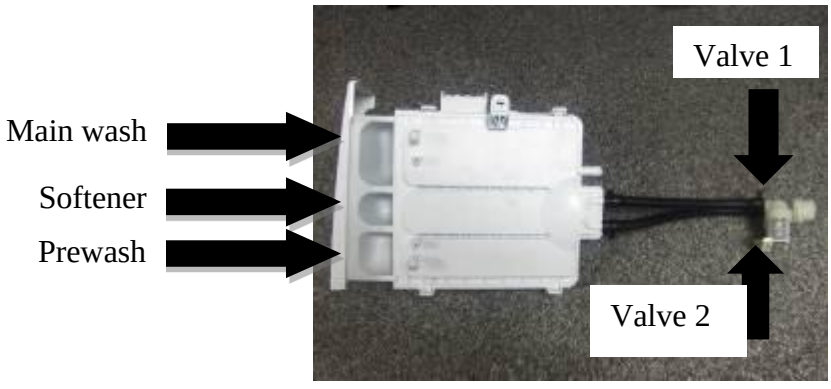
Unbalance Control System is another safety algorithm that protects the machine and environment avoiding machine movement due to vibration during spinning profile. The algorithm tries to balance load by a special balancing agitation, postponing spin profile till it is balanced. This avoids spinning while load is unbalanced and prevents any possible physical harm both to the appliance and to surroundings.

3. Assembly Information.

3.1. The Customers need to be informed about the below subjects.

1. General information about the product. (General features, class of energy and RPM etc.)
2. Classification of the laundry depends on the color, type and feature.
3. Selecting the particular program for the laundry and using the detergent and softener.
4. Using the knob of the temperature and RPM and settings
5. The information about the volume of the dry laundry that could be washed one at a time,
6. Information about the additional functions
7. Requirements in order to start a program (step by step)
8. How to put a program on hold
9. How to cancel a program
10. Activation and deactivation of the child lock. In addition it needs to be clarified that, child lock does not deactivated by itself at the end of the program.
11. Information about the half load detection and its effect to programs.
12. Information about the control of the unbalance load distribution and machine behavior with unbalanced load during the spin cycle.
13. Information about the door lock. (Door lock deactivation takes place after 2 min when program ends, or after 2 minutes, when end light is flash and during the empting process in program.)
14. Please advise customer to read the user manual and firstly see the relevant section when possible fault occurs.
15. Information about the adjustment of the feet in case of replacement of machine,
16. Information about using and cleaning the detergent drawer group,
17. Information about necessary cleaning period of the drain pump, drain hose and filter, water entry valve.
18. The information about the drain hose location.
19. The information about proper condition of the water entry and drain. Please advise the customer to make sure the hoses are not bended or twisted and please warn the customer not to use additional hose part.
20. Information about the situation that observing few water inside the drum during the washing cycle, is normal.
21. Information about keeping the transformation screws and assembling on the machine whenever the machine needs to be replaced.

Please advise the customer to read the user manual and firstly see the relevant section when and possible fault occurs.
To do list:
1. Please check the environmental conditions. (Water pressure, voltage, current, ground, electrical installation, plumbing)
2. Make sure the product is used properly. (Child lock deactivation. Etc.)
3. Use the autotest program to test the machine.
4. If system shows any faulty code, find the particular code on the error list and take and action according to it.
5. Check the electrical connections.
6. Make sure the cable and hose connections are regular.

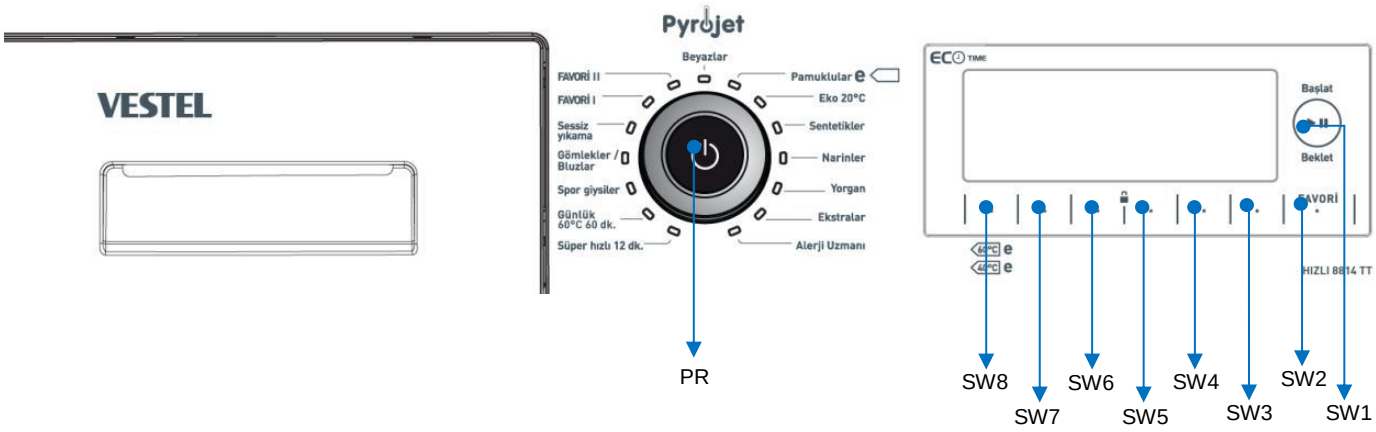


Prewash = Water enters from Valve 1

Main Wash = Water enters from Valve 2

Softener = Water enters from Valve 1 and 2

4. Control Panel and Acronyms



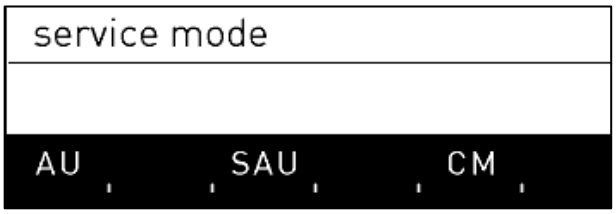
PR	Program selector 16 programs including off position
SW1	Switch 1, Start / Pause
SW2	Switch 2, Memory
SW3	Switch 3, Other Options / Delay Start
SW4	Switch 4, Settings / Eco Time Option
SW5	Switch 5, Stain Level Selection / Easy Ironing Option
SW6	Switch 6, Stain Type Selection / Extra Rinse & Anti Allergic Option
SW7	Switch 7, Spin Speed Selection / Prewash Option
SW8	Switch 8, Temperature Selection / Previous Options

Symbols							
	Selection Mode		No Spin		Brightness		No Selection
	Prewash		Other Options		Contrast		Pause
	Extra Rinse – Allergy Safe		Settings		Factory Settings		Decrease Selection
	Easy Ironing		Language		Reset		Increase Selection
ECO TIME	Eco Time		Clock		Door Closed and Locked		Previous Selection
	Delay Start		Sound		Door Closed and Unlocked		Next Selection
°C	Temperature		Sound On		Door Open		Select
	Cold Wash		Sound Off	2/3	Dosage Indicator		Cancel
	Spin Speed						

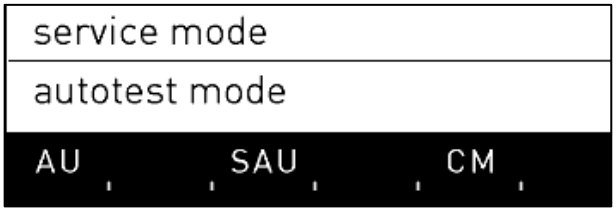
5. Test Mode

5.1. Autotest

1. Open SI by pressing SW4 for 5 seconds.



2. Press button below “AU” indication which stands for *Autotest.*



3. When autotest is finished, END screen is visualized.

5.1.1. Autotest Steps

Autotest follows a predefined flowchart in order. Unlike service autotest, autotest automatically skips to next step upon completing one. The steps of the test are as follows:

Step1:
Drain pump is activated.
EPS frequency is checked.
Step2:
Motor ramps to max spin.
Prewash & Wash valves are activated in order.
Step3:
Motor ramps down to stop.
Prewash & Wash valves are activated simultaneously.
Step4:
Motor turns clockwise (low speed).
Step5:
Motor turns counterclockwise (low speed).
Step6:
Twinjet is activated.
Step7:
Prewash & Wash valves are activated simultaneously.
Step8:
Washer heater is activated. Washer NTC values are checked in this step.

In case of no failure test ends after this step and “End” is displayed. In case of an error detection EXX and error definition will pop up on display. (where XX is the error number 1 to 10)

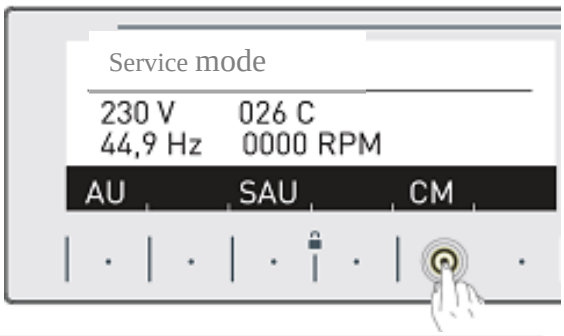
Please see following autotest chart for details.

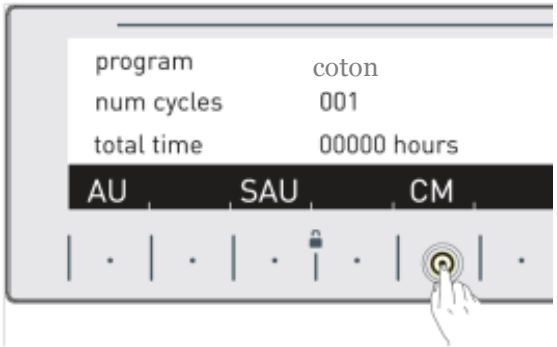
5.2 Program Parameters

When the SW2 ‘’memory’’ button is pressed as long as 10 seconds at any moment, The parameters of the program occus on the display:
Temperature
Voltage
RPM
HZ value which EPS’ detects.

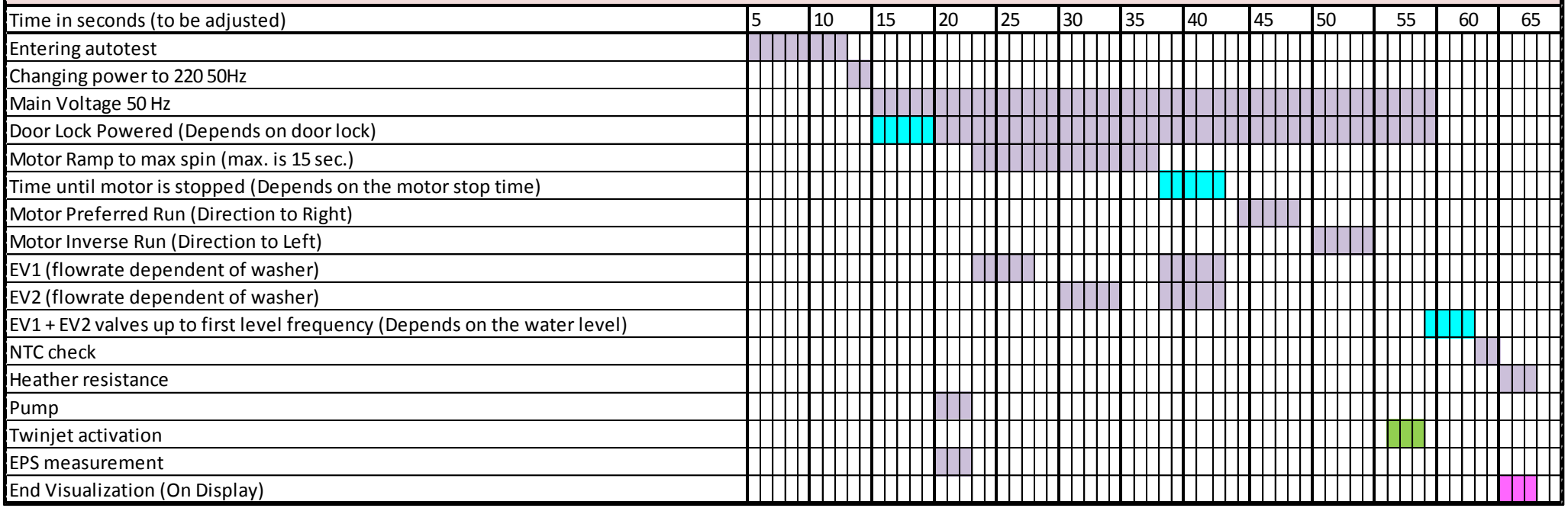
In order to see the normal screen please press the same button as long as 10 seconds again.

If the SW4 button is pressed as long as 10 seconds during The service mode, counter will appear.
Counter shows the program detail which program knob Set on at the moment.





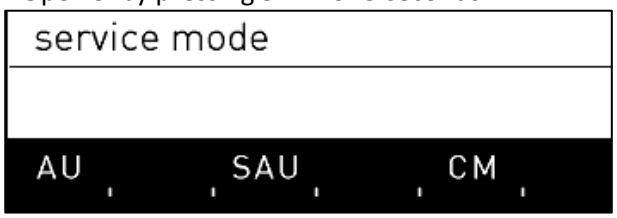
AUTOTEST


Time in seconds (to be adjusted)
5
10
15
20
25
30
35
40
45
50
55
60
65
Entering autotest
Changing power to 220 50Hz
Main Voltage 50 Hz
Door Lock Powered (Depends on door lock)
Motor Ramp to max spin (max. is 15 sec.)
Time until motor is stopped (Depends on the motor stop time)
Motor Preferred Run (Direction to Right)
Motor Inverse Run (Direction to Left)
EV1 (flowrate dependent of washer)
EV2 (flowrate dependent of washer)
EV1 + EV2 valves up to first level frequency (Depends on the water level)
NTC check
Heather resistance
Pump
Twinjet activation
EPS measurement
End Visualization (On Display)

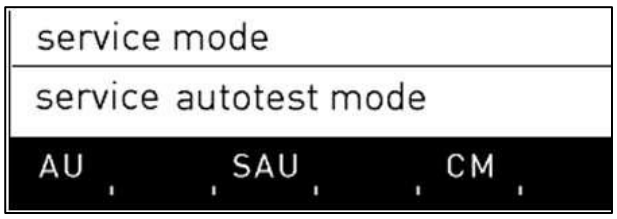
6. Service Mode

6.1. Service Autotest

1. Open SI by pressing SW4 for 5 seconds.



2. Press button below “SAU” indication which stands for *Service Autotest.*



3. When autotest is finished, END screen is visualized.

	Step1	Step 2	Step 3
	PR Position: Program 1	PR Position: Program 2	PR Position: Program 3
	HEATER ON	PUMP ON	TEST PROGRAM ON (Rapid 12’*)
Comments :	When entering in service test, door will be locked.		Test is over Door will be unlocked, machine will go to END state.

5.1.1. Service Autotest Steps

If you turn knob position to other program between 1st to 3rd it will skip current test and start the selected one. It is recommended not to skip any steps for a detailed checkup. Unlike autotest, service autotest starts next test step manually by rotating program selection knob.

Step1:
There will be a certain amount of water intake and then washer heater is activated for 8 minutes. Washer NTC values are checked in this period. In case of a washer heater/NTC failure, it pops up E05 error displaying “E05” on SW3.

In case of no failure at the end of heating step, “Please change selector” will be displayed. You can turn program knob to 2nd position to continue with step2.

*During this step if EPS detects high water level, overflow algorithm is applied and E04 is released.
*If user changes the selector position, machine will do what is defined for the new selected position.

Step2:
Drain pump is activated; in case of a pump failure it pops up E03 error.

At the end of pump activation, “Please change selector” will be displayed. You can turn program knob to 3rd position to continue with step3.

Step3:
Rapid 12’*(15’ for non-TJ models) program algorithms is run testing all washing components, the only difference is error codes are displayed on SW3 which normally are not displayed to end user.

If case of no error service autotest ends and "End" is displayed.

6.2. Failure Codes

Error Indication	Error Number	Indication in UI	Indication in SI
Door Lock Error	E01	A	A
Lack of water	E02	A	A
Pump failure	E03	A	A
Overflow	E04	A	A
NTC or Heater Failure	E05	NA	A
Motor Failure	E06	NA	A
Voltage	E09	NA	A
Electronic Pressure Sensor	E10	NA	A
Flowmeter	E17	NA	A
Motor (BLDC)	E19	NA	A
Pyrojet	E20	NA	A

7. Critical Torque Values

	Assembly Locatıon	**Bolt/Nut**	**Torque Min. (Nm)**	**Torque Nom. (Nm)**	**Torque Max. (Nm)**	**Air Pressure Wrench (rpm)**
*	Transport Screw Assembly	Transport Screws	6.50	6.50	7.00	1000
*	Motor Assembly	Motor Screws	6.00	6.50	7.50	800
*	Front Concrete Weight - Front Tub Assembly	Front Counterweight Screws	14.00	14.50	14.75	600
*	Upper Counter Weight Assembly	Upper Counterweight Screws	25.00	27.50	30.00	440
*	Pulley – Drive Shaft – Washing Group Assembly	Pulley – Drive Shaft Assembly Bolt	39.50	40.00	40.50	440
*	Heater Assembly	Heater Assembly Nut	3.85	4.00	4.00	970

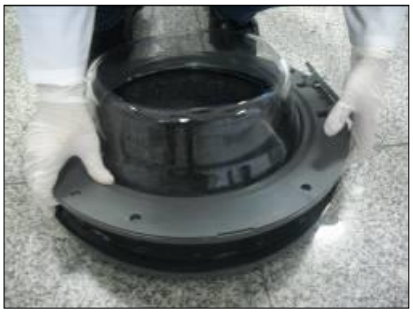
The bolts/nuts above are important for product safety purposes. Please tighten screw, bolts and nuts according to the torque values given in table above.

8. Disassembly and Assembly Instructions

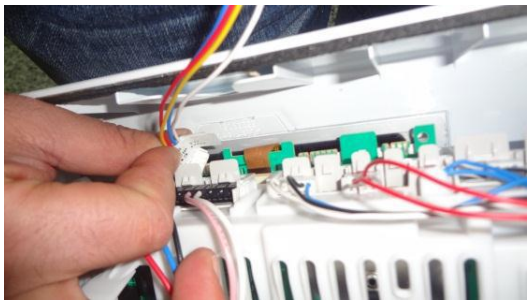
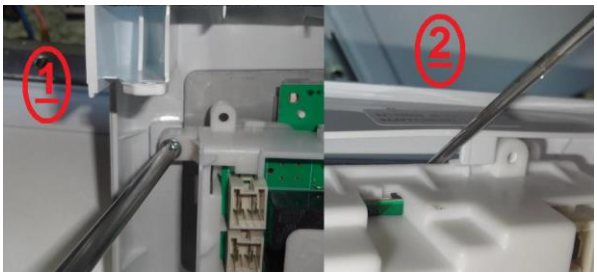
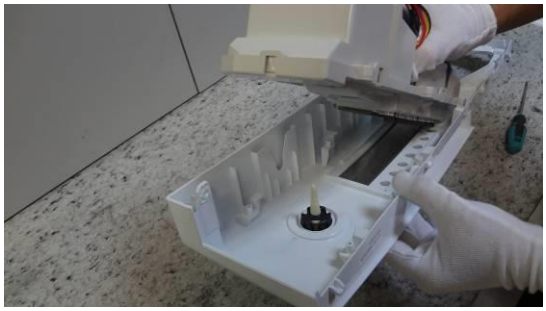
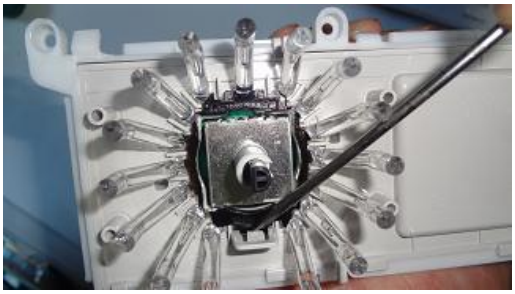
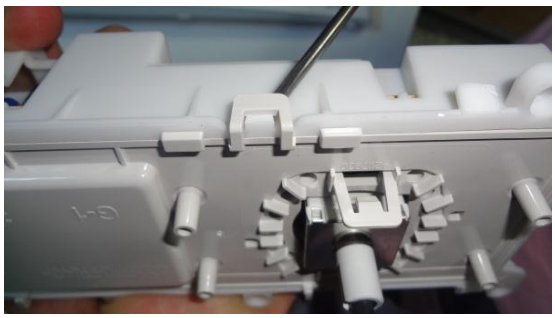
8.1. Top Plate

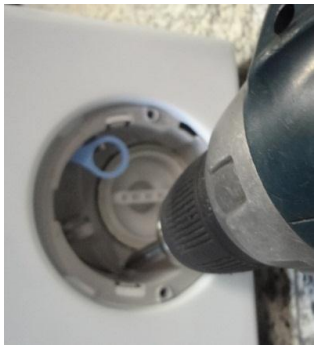
1		2	
	Remove two screws that fix the top-plate at the back.		Push the top-plate back and pull it up.

8.2. Door

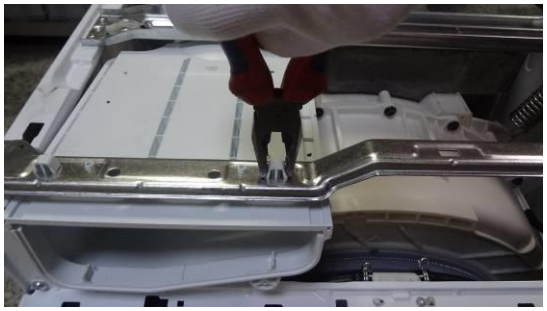
1	   T25	2	
	Remove two screws that fix the door. (by using T25 tool)		Pull the door up.
3		4	
	Remove screws that fix the door group.		Put the door outside plastic with helping screwdriver.
5		6	
	Remove the door inside plastic.		Remove six screws that fix the door hinge.

7*		**8***	
	Remove the door handle.		Remove the door handle pin.
8.3. Spring Wire			
1		**2**	
	First remove the spring wire fixing the tub bellows seal by using the small size screw driver. Pull the tub bellows seal.		Remove the tub bellows seal-body fixing spring.
8.4. Detergent Drawer			
1		**2**	
	Gently pull the detergent drawer.		While pressing siphon cover keep pulling drawer to remove it.
8.5. Control Panel			
1		**2**	
	Remove the screw which fixes the control panel to the front panel.		Remove two screws fixing control panel.

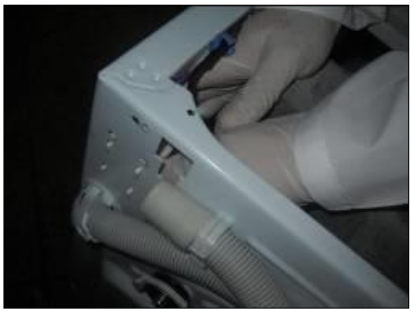
3		**4**	
	Pull the control panel out		Remove socket connectors and remove the LCD connector.
5		**6**	
	1) Remove the screw that fix PCB box 2) Remove the clips by using the screw driver as shown image.		Remove the PCB box from the Control Panel
7		**8**	
	Remove the Lightguide cover by pressing the clip that fixes it.		Remove the lightguide by pressing the clip that fixes it.
8.6. Electronic Card & Fuse			
1		**2**	
	Remove PCB box using a small screw driver		Remove the clip fixing the cover.

8.7. Front Panel			
1		**2**	
	Remove the screw under the pomp cover		Remove the emergency open pull
3		**4**	
	Remove the pomp inside cover by pressing the clip		Remove the screw fixing the front panel at the bottom
5		**6**	
	Remove the screws fixing the door lock remove the door lock by pressing.		Remove the tub bellows seal.
7		**8**	
	Remove two screws fixing front panel to body		Remove the screw fixing twinjet elbow

9		**10**	
	Pull front panel up		Remove front panel

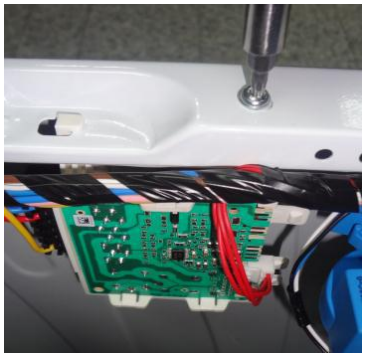
8.8. Support Bracket			
1		**2**	
	Remove two screws fixing the body group on the upper part		Remove two clips fixing detergent drawer housing to upper support bracket
8.9. Detergent Drawer Housing			
1		**2**	
	Remove the tub bellow hose by releasing the holder extensions of bellow hose		Unplug connectors from feed valve
3		**4**	
	Slightly turn the feed valve counter-clockwise to remove		Remove the detergent drawer housing assembly

8.10. Power Cable Group and EMI Filter

1		**2**	
	Remove the five connectors that is connected to the EMI filter		Remove two screws fixing EMI filter.
3		**4**	
	Pull the power cable group up		Remove EMI filter

8.11. Electronic Pressure Switch (EPS)

1		**2**	
	Unplug EPS connector		Pull EPS up
3			
	Remove clamp from EPS hose		

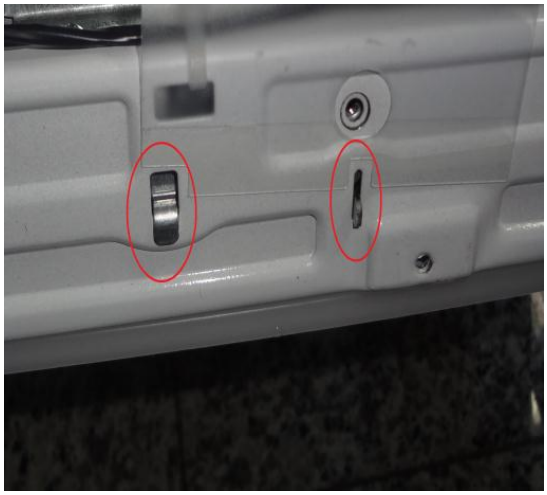
8.12. Door Lock*		8.13. Pyrojet Card	
1		2	
	Unplug door lock connector		Remove the screws fixing the card. Remove the connections and remove the card as a last step

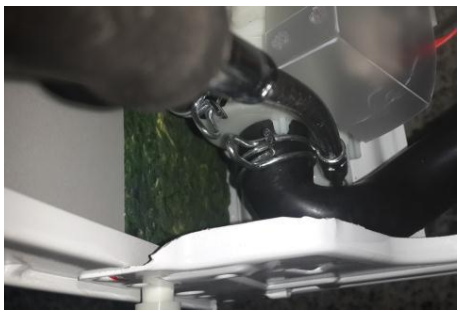
8.14. Drain Pump			
1		2	
	Remove clamp holding drain hose by using a nipper.		Unplug drain pump connector
3		4	
	Remove screws holding drain pump		Remove the pump entrance hose and pyrojet hose by using the nippers
8.15. Front Counterweight*			
1		2	
	Remove three screws on the front counterweight. (Wrench size 13 mm)		Gently pull counterweight out

8.16. Heater

1		**2**	
	Unplug heater connectors		Remove nut (8 mm) fixing the heater
3			
	Pull heater out gently holding both sides.		

8.17. Pyrojet System

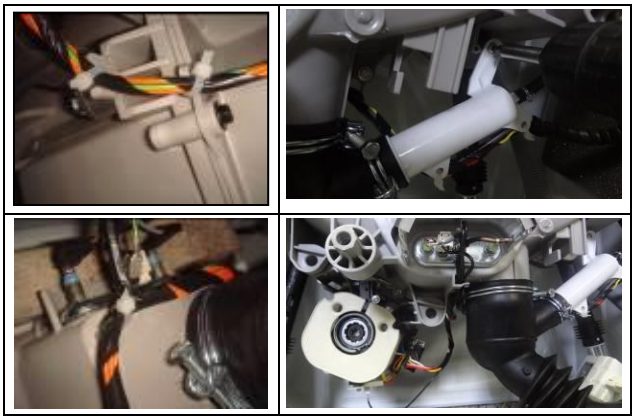
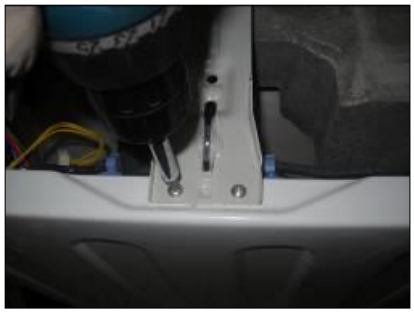
1		**2**	
	Remove the screws that fix the pyrojet unit		Remove the protective foil if replacement available if not bend it to the other side.
3		**4**	
	Remove the pyrojet unit by pulling upwards.		Remove the conncetions.

5		**6**	
	Remove the clap that fixies the hose by using the nipper		Remove the socket that belongs to Pyrojet and remove the pyrojet.
8.18. Twinjet System*			
1		**2**	
	Remove twinjet hoses from tub bellow seal pulling them up		Remove the tub gasket clip by using small screwdriver
3		**4**	
	Remove the cover that placed under the machine by removing the screws		Remove screw fixing circulation pump
5		**6**	
	Lay the appliance down and press on ratchet holding circulation pump		Remove circulation pump

7		**8**	
	Remove cable connector		Remove the hose on the circulation pump

8.19. Tub Bellow Seal*			
1		**2**	
	Remove the tub gasket clip by using small screwdriver		Hold the tub bellows seal and gasket-body fixing spring together, and pull them out.
8.20. Transport Screw			
1		**2**	
	Remove four transport screws		Hold the transport screw and pull it out.
8.21. Upper Counterweight*			
1		**2**	
	Remove two screws fixing the upper counterweight by using box wrench size 13 mm		Hold and carry upper-counterweight out.

8.22. Washing Group

1		2	
	Unplug motor connectors		Cut all the cable ties which fix cable group
3		4	
	Remove the screws fixing hanger bracket		Remove the washing group carrying it out through front side

8.23. Shock Absorber Pin

1	
	Remove shock absorber pins squeezing the ratchet by a pliers

8.24. Driven Pulley

1	
	Remove the belt rotating the driven pulley

8.25. Driven Pulley

1		1	
	Remove the bolt at the center of pulley by tucking a wooden bar avoids rotation		Remove pulley

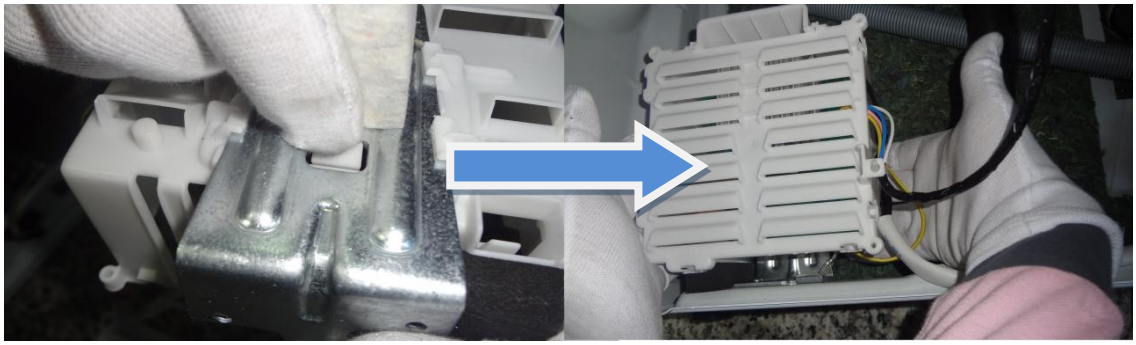
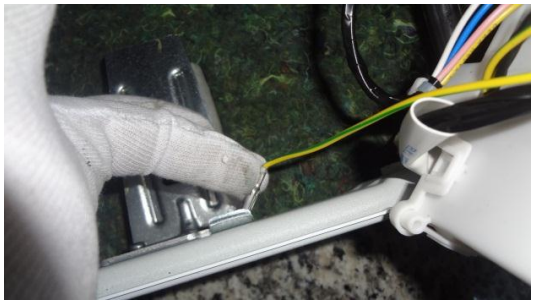
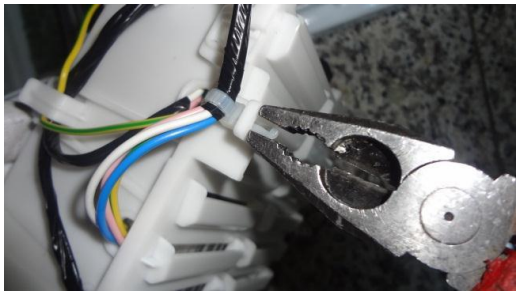
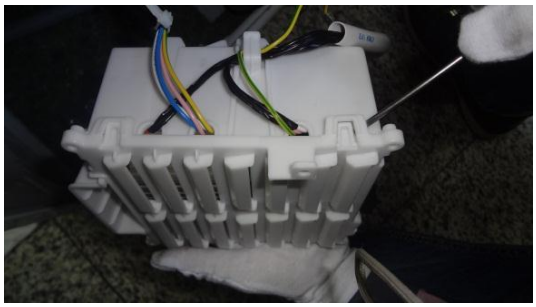
8.26. Motor

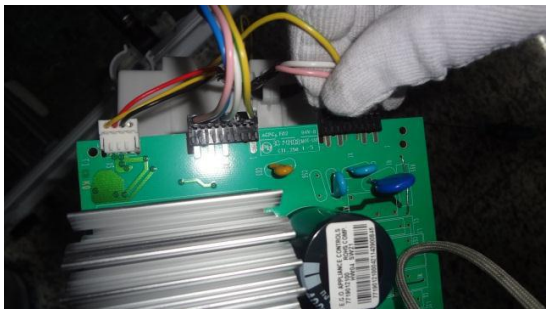
1		**2**	
	Remove two screws holding motor by using box wrench		Pull the motor upwards.

8.27. Tub

1		**2**	
	Remove tub inlet bellow hose loosening the clamp squeezing it by using a pliers		Remove screw holding EPS reservoir
3		**4**	
	Remove tub outlet bellowed hose loosening screwed-clamp		Remove 19 screws around tub using box wrench size 8 mm
5		**6**	
	Remove front tub		Remove drum

8.28 BLDC Card

1		**2**	
	Remove the bottom plate by tilting the machine		This is the only way to remove the card without removing the washer group
3			
	Remove the card by pressing the clip that placed behind (it could be seen on the first image) of the card and pushing the card.		
4		**5**	
	Remove the connection		Remove the cable group that belongs to card
6		**7**	
	Remove the card box that belongs to the pyrojet unit, by pressing the clips with screw driver.		Remove the card by pressing the clips around with screw driver.

8		**9**	
	Remove the connections.		Remove the card completely
10		**11**	
	Remove the BLDC motor card fixing screws.		Remove the ground connection and make sure this connection is plugged during the assembly.

9. Component Specifications

9.1. Drain Pump

Drain pump is both a mechanical and electrical component which is used to drain water inside the washing machine. It has an synchronous motor inside. For better performance maintenance, pump filter should be cleaned regularly.

Drain pump

Technical features

Nominal voltage	220-240 V	Resistor (coil)	136 Ω (±5%)
Nominal current	0.28 A (±10 %)	Water flow	17 L/min(to 1 m height)
Nominal power	37 W		
Frequency	50 Hz	Thermal protector	YES

Testing component

Check the resistance value on the component with multi meter as shown below.
Resistance value should be between 131- 141 Ω

You can determine the ohm value by measuring from the blue cable at 2nd and blue cable at 11th position in the large socket (refer wiring diagram in section 12) as shown below figure. Resistance value should be between 131- 141 Ω

9.2. Circulation Pump*

The component is used for circulation of water inside the drum in order to increase washing performance.

Circulation Pump

Technical features

Nominal voltage	220 - 240 V
Frequence	50 Hz
Resistor (ci)	169,5 Ω (±5%)

Testing component

Check the resistance value on the component with multi meter as shown below.
Resistance value should be between 160- 180 Ω

You can determine the ohm value by measuring from the red cable at 5th and red cable at 12th position in the small socket (refer wiring diagram in section 12) as shown below figure. Resistance value should be between 160- 180 Ω

9.3. Heater

Heating element (Resistance) is a component which is desingned to regulate temperature of water inside the drum. It has three connections: Phase, notral and ground connections.

Resistance

Technical features

Heater type	Tubular heating element with NTC – sensor	Nominal power	varies
		Resistance	varies
Nominal voltage	230 V	Thermal fuse	2 sided

Testing component

Check the resistance value on the component with multi meter as shown below.
Please contact WMCS for nominal measurement values of resistance used in your appliance. Do not forget to provide serial number information of appliance in your inquiry.

9.4. NTC

Component which sends signals to PCB about the water temperature inside the tub. The Resistance (Ohm) value of the NTC decreases as the temperature increases.

NTC

Technical features

Tem (°C)	R min (kΩ)	R max (kΩ)
-10	54.9	62.6
-5	43.0	48.6
0	33.9	38.1
5	27.0	30.1
10	21.6	23.9
15	17.4	19.1
20	14.1	15.4
25	11.5	12.5
30	9.4	10.2
35	7.8	8.3
40	6.4	6.9
45	5.4	5.7

Tem (°C)	R min (kΩ)	R max (kΩ)
50	4.5	4.7
55	3.8	3.9
60	3.2	3.3
6	2.7	2.8
70	2.3	2.4
75	1.9	2.0
80	1.7	1.8
85	1.4	1.5
90	1.2	1.3
95	1.1	1.1
100	0.9	1.0

NTC Resistance vs. NTC Temperature

Testing component

Check the resistance value on the component with multi meter as shown below.

You can determine the ohm value by measuring from the blackcable at 3rd and black cable at 11th position in the small socket (refer wiring diagram in section 12) as shown in below figure. NTC resistance value varies depending on temperature.

9.5. Valve

Valve is an electrical and mechanical component which is designed to take water from the network system into the washing machine. It is operated by PCB card.

Valve

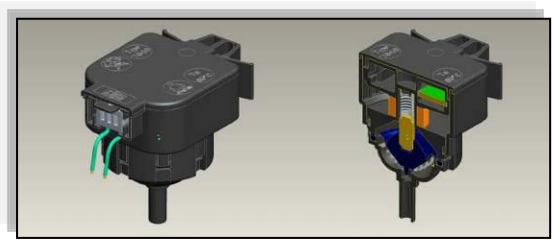
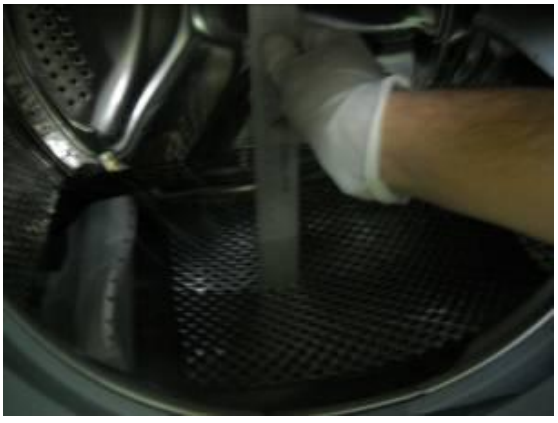
Technical features

Nominal voltage	220-240 V	Rated flow	7 L/min (±15 %)
Nominal power	8 VA	Operating water pressure	0.03 - 1 Mpa
Frequency	50-60 Hz		

Testing component

Check the resistance value on the component with multimeter as shown below. Valve water flow rate should be between 6 - 8 L/min. Each valve coil resistance values should be between 3.3 - 4.2 kΩ.

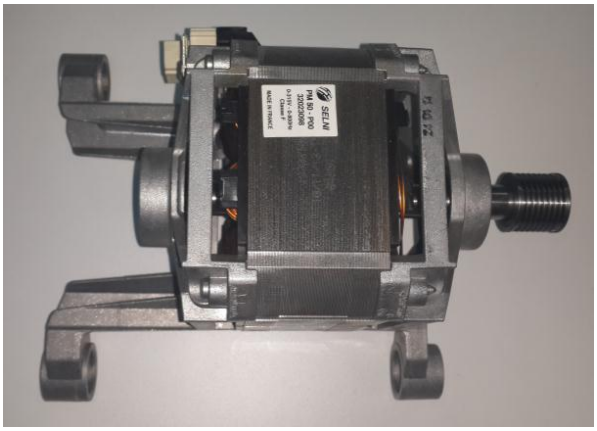
You can determine the resistance value of the main wash valve by measuring from the blue cable at 5th and white cable at 15th position or the pre-wash valve by measuring from the black cable at 14th and white cable at 15th position in the large socket (refer wiring diagram in section 12) as shown in below figure. Each valve coil resistance values should be between 3.3 - 4.2 kohm.

9.6. Electronic Pressure Sensor (EPS)*	
Electromagnetic field occurs due to movement of pressurized membrane. The spring moves vertically by nucleus due to electromagnetic field. The water level is regulated according to the frequency changes of the spring by electronic card.	 EPS
Testing component	
Press the door lock with using screw driver.	
Select a program and press the start button. Bring porgram knob to position 1 (Cotton 90°C program)	
Wait for water intake step to finish. You can recognize it by listening the water sound or slightly opening and observing detergent drawer As soon as water intake is over turn program knob to position 0 (Off position)	
Check water level from door glass. The water level should be just below door glass as seen in the picture below: (There is a %10 tolerance with this level)	

9.7. Motor

The washing machine has an asynchronous motor. It is controlled by the PCB. It is essential to check the motor for correct diagnosis and quick servicing. In the below picture, socket points on the motor is shown to measure with multi meter.

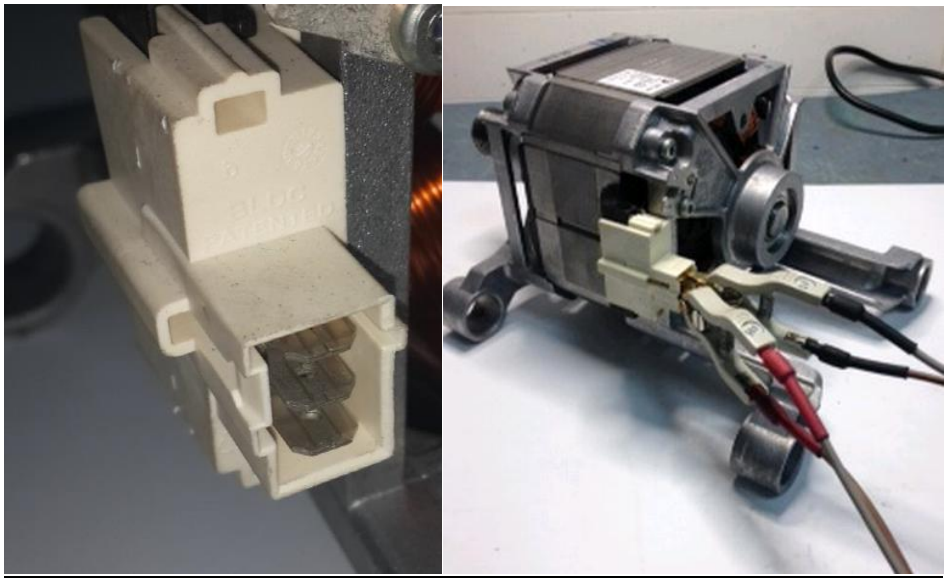
ÜNİVERSAL MOTOR BLDC MOTOR



Motor

3 phase brushless DC Motor.
Ferrite Magnet
Stator resistance (phase- Neutral) 2,38 ± 7% Ω

Motor socket terminals

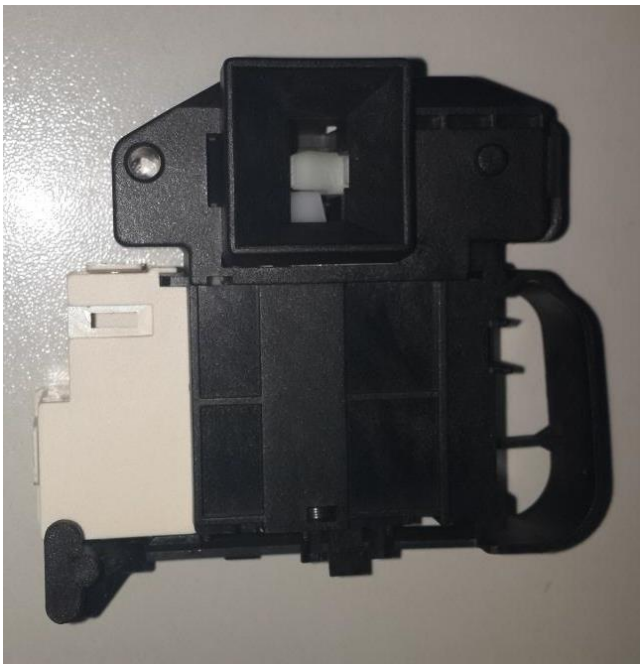


Measurement of resistance and inductance are done between the terminals.

9.8. Door Lock*

The type of door lock is the solenoid fixed hook door lock. Since the locking could be done with the fixed hook, door handle is not used on model. The door is opened at the end of the program and also as long as the condition of the water level and temperature in the drum is safe, door could be open.

In order to intervene to the door lock in emergency cases, the door could be opened by pulling the emergency handle which placed under the pump cover. But the user needs to be make sure that the water level and temperature condition in the drum is safe.



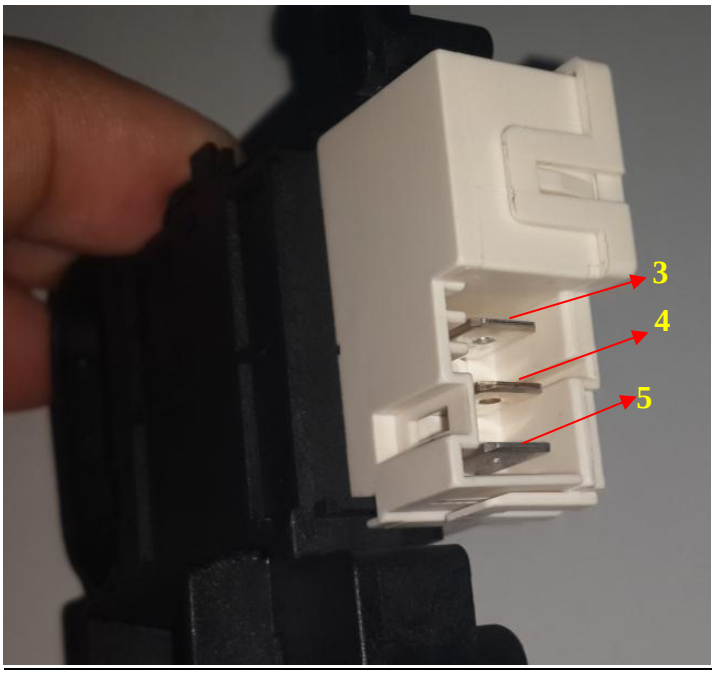
Door lock

Technical features

Nominal voltage (Rated)	170 - 250 V
Current (Rated)	16 (6) A

Testing component

Check the resistance value on the component with multi-meter as shown in below figures. Resistance value on the (PTC overload + solenoid) should be 240Ω ±20% at 25 °C. That resistance value can be measured from terminal 3-4 (refer to section12 Wiring Connection Diagram).



This socket shows the connection between terminal 3-4 (See wiring diagram below). The resistance read from terminal 3-4 is the resistance of PTC overload plus resistance of solenoid.

9.9. Pyrojet*

Pyrojet unit which placed on the circulation system, is responsible of heating the circulation water. By the help of the pyrojet, circulation water inject with more heat and lesser time.

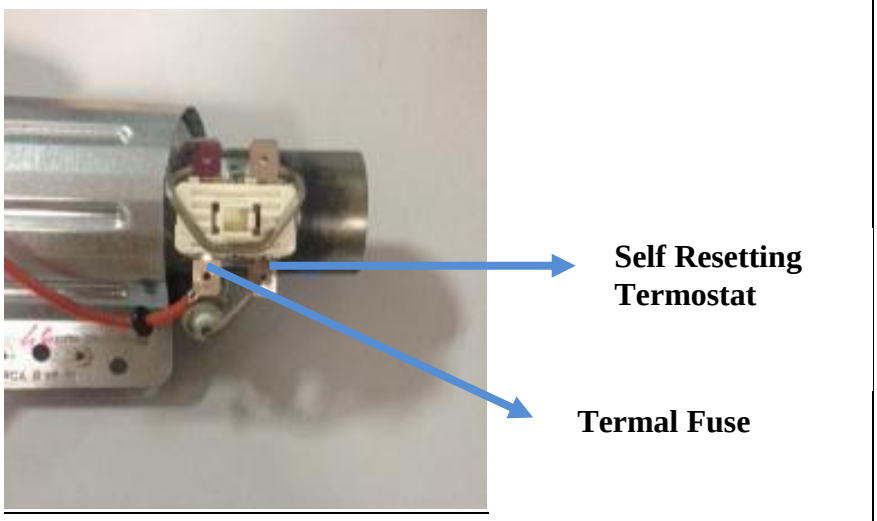
Pyrojet Unit

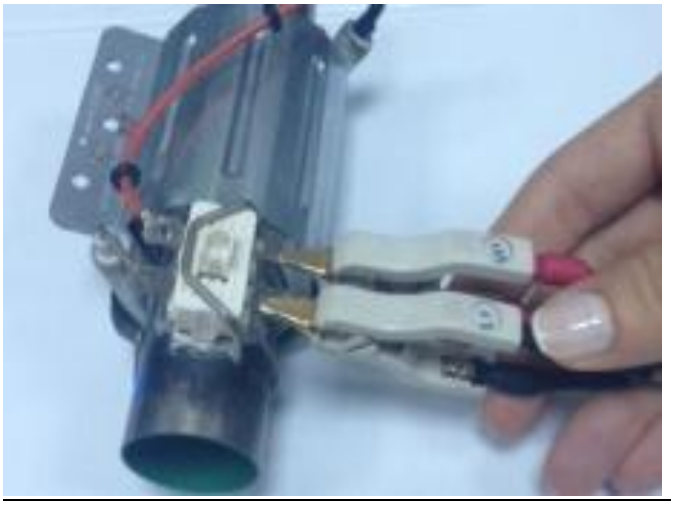
Technical features

Nominal voltage	250 V	Terminal operating temperature	206°C(+0-10) °C
Power	1000W±5%	Self reset temperature	95 ± 5 °C

Testing component

Resistance value on the should be 52,6Ω ±20% at 25 °C.





10. Wiring Diagram*