HOSHIZAKI

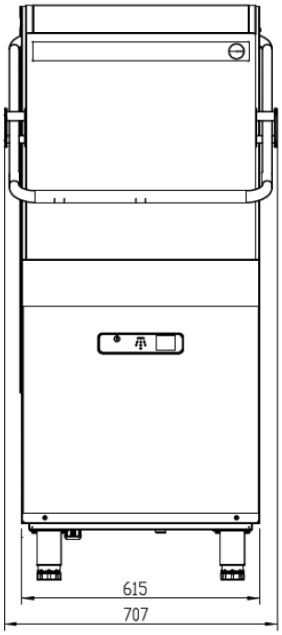
HW-600B/HW-600B3 PDRT SERVICE MANUAL

INDEX

1-Tecnical features and device dimensions:

MODEL	HW-600B3 PDRT			
Total Rating	380 V ~ 3NPE/50 Hz	380 V ~ 3NPE/60 Hz	415 V ~ 3NPE/50 Hz	415 V ~ 3NPE/60 Hz
Total Rating(kW)	9.66	9.66	11,46	11,46
Washing Capacity (Plate/Hour)	1108	1108	1108	1108
Washing Capacity (Basket/Hour)	69/35/27/23/18	69/35/27/23/18	69/35/27/23/18	69/35/27/23/18
Washing/Boiler Tank Capacity	22/7	22/7	22/7	22/7
Washing Program Number	5	5	5	5
Program Times(sn.)	52/102/132/152 192	52/102/132/1521 92	52/102/132/152/ 192	52/102/132/152/ 192
Washing Water Temp. (°C)	55-60	55-60	55-60	55-60
Rinsing Water Temp. (°C) max.	80-85	80-85	80-85	80-85
Water Inlet Connection	3/4 "	3/4 "	3/4 "	3/4 "
Water Inlet Pressure (Bar)/Temp.	2-4 Bar / 50 °C	2-4 Bar / 50 °C	2-4 Bar / 50 °C	2-4 Bar / 50 °C
Heat Power (Washing/Rinsing)	1,8 / 9 kW	1,8 / 9 kW	2,2/ 10,8 kW	2,2/ 10,8 kW
Gross Weight	110 (±5) kg	110 (±5) kg	110 (±5) kg	110 (±5) kg
Dimensions (WxDxH) (mm.)	707X779X1485	707X779X1485	707X779X1485	707X779X1485
Protection Class	IPX5	IPX5	IPX5	IPX5
Rack Dimension (cm.)	50x50	50x50	50x50	50x50
Loading Height	445 mm	445 mm	445 mm	445 mm
Inclination	6°	6°	6°	6°
Washing Pump Power (kW)	0.66	0.66	0.66	0.66
Rinsing Pump Power (kW)	0,25	0,25	0,25	0,25
Rinse Aid Pump	+	+	+	+
Detergent Pump	+	+	+	+
Rinsing Pump	+	+	+	+
Drain Pump	+	+	+	+
Electrical Connection Cable / Flexible Water Supply and Drain Hose	+	+	+	+

MODEL	HW-600B PDRT			
Total Rating	220V ~NPE/50Hz	240V ~ NPE/50 Hz	220V ~ NPE/60 Hz	240V ~ NPE/60 Hz
Total Rating(kW)	3,41	3,96	3,41	3,96
Washing Capacity (Plate/Hour)	1108	1108	1108	1108
Washing Capacity (Basket/Hour)	69/35/27/23/18	69/35/27/23/18	69/35/27/23/18	69/35/27/23/18
Washing/Boiler Tank Capacity	22/7	22/7	22/7	22/7
Washing Program Number	5	5	5	5
Program Times(sn.)	52/102/132/152 192	52/102/132/1521 92	52/102/132/152/ 192	52/102/132/152/ 192
Washing Water Temp. (°C)	55-60	55-60	55-60	55-60
Rinsing Water Temp. (°C) max.	80-85	80-85	80-85	80-85
Water Inlet Connection	3/4 "	3/4 "	3/4 "	3/4 "
Water Inlet Pressure (Bar)/Temp.	2-4 Bar / 50 °C	2-4 Bar / 50 °C	2-4 Bar / 50 °C	2-4 Bar / 50 °C
Heat Power (Washing/Rinsing)	1,8 / 2,75 kW	2,2 / 3,3 kW	1,8 / 2,75 kW	2,2 / 3,3 kW
Gross Weight	110 (±5) kg	110 (±5) kg	110 (±5) kg	110 (±5) kg
Dimensions (WxDxH) (mm.)	707X779X1485	707X779X1485	707X779X1485	707X779X1485
Protection Class	IPX5	IPX5	IPX5	IPX5
Rack Dimension (cm.)	50x50	50x50	50x50	50x50
Loading Height	445 mm	445 mm	445 mm	445 mm
Inclination	6°	6°	6°	6°
Washing Pump Power (kW)	0.66	0.66	0.66	0.66
Rinsing Pump Power (kW)	0,25	0,25	0,25	0,25
Rinse Aid Pump	+	+	+	+
Detergent Pump	+	+	+	+
Rinsing Pump	+	+	+	+
Drain Pump	+	+	+	+
Electrical Connection Cable / Flexible Water Supply and Drain Hose	+	+	+	+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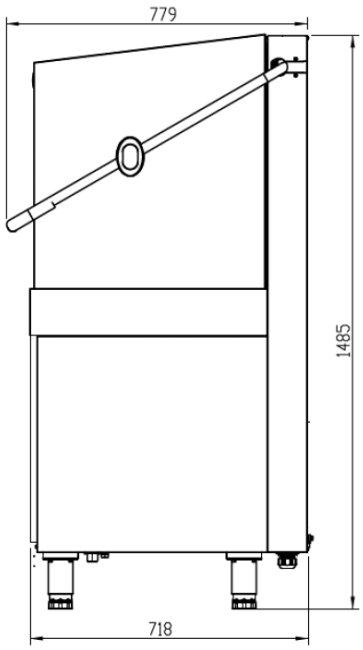
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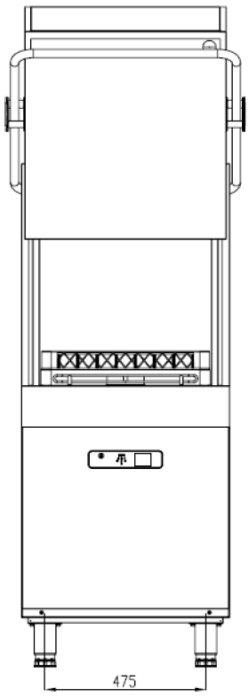
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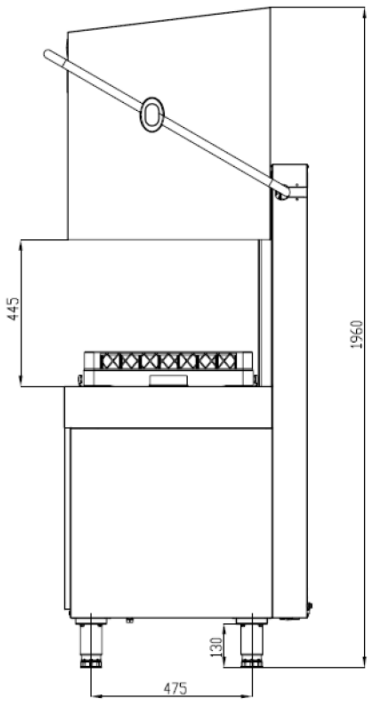
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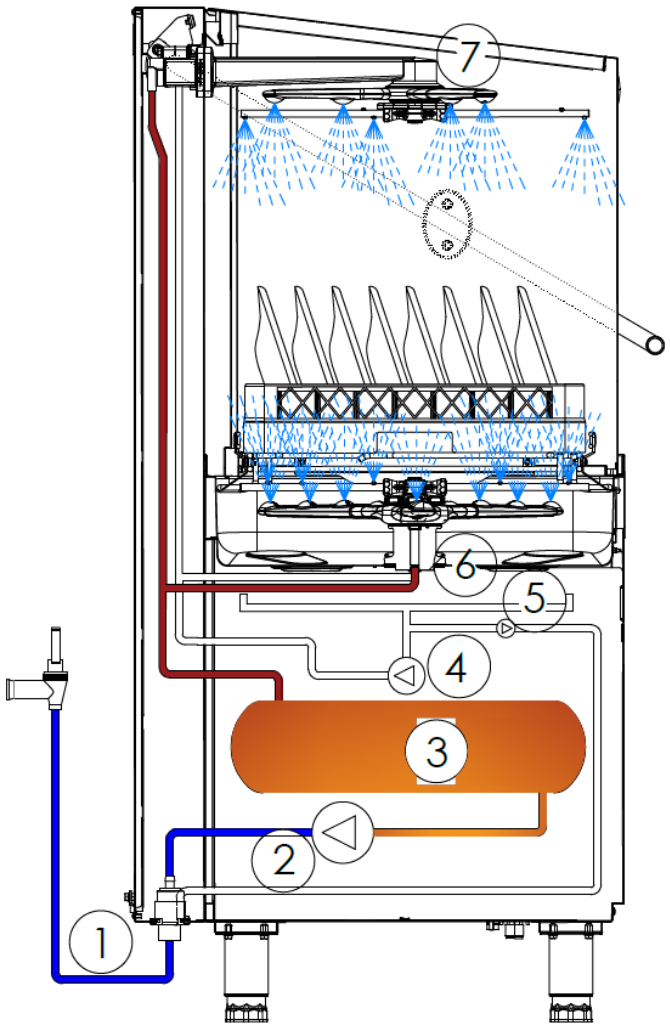
475

2-Dishwasher Working Principle :



Water Path

1-Water inlet valve

2-Rinse pump

3-İnternal booster

4-Wash pump

5- Drain pump

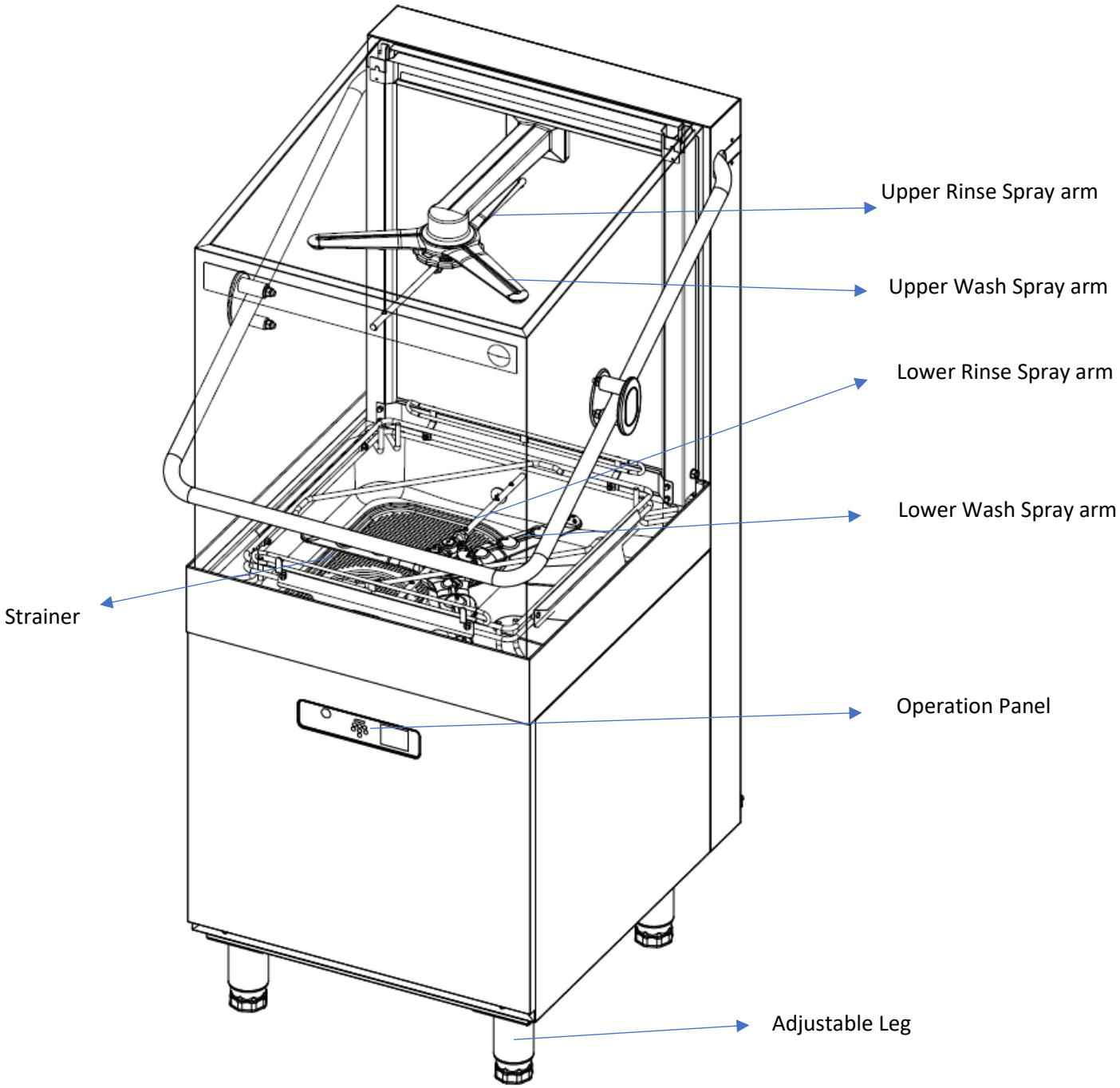
6-Lower spray arm

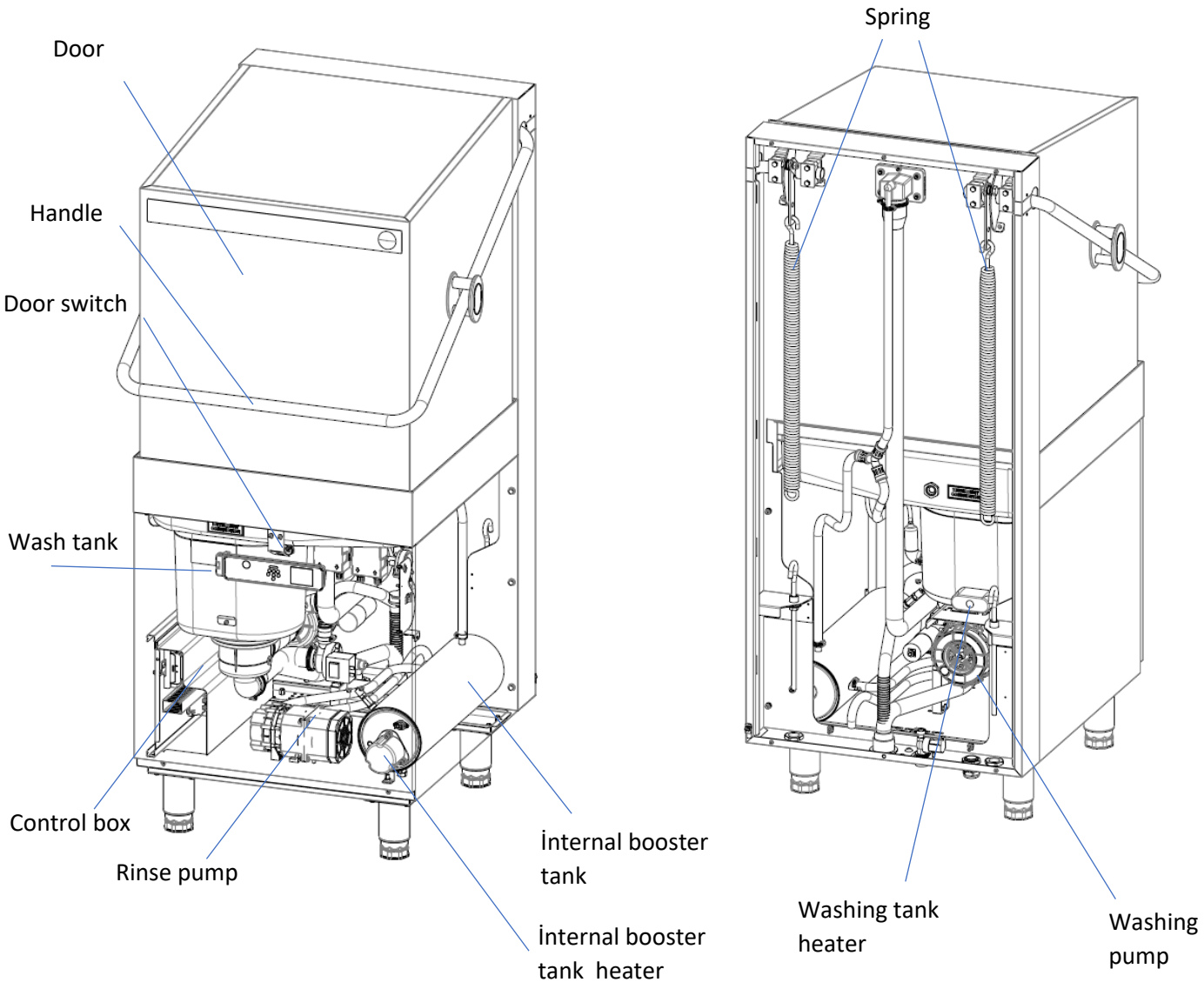
7-Upper spray arm

• The wash water is sprayed by the wash pump from the upper and lower wash spray arms into the wash compartment.

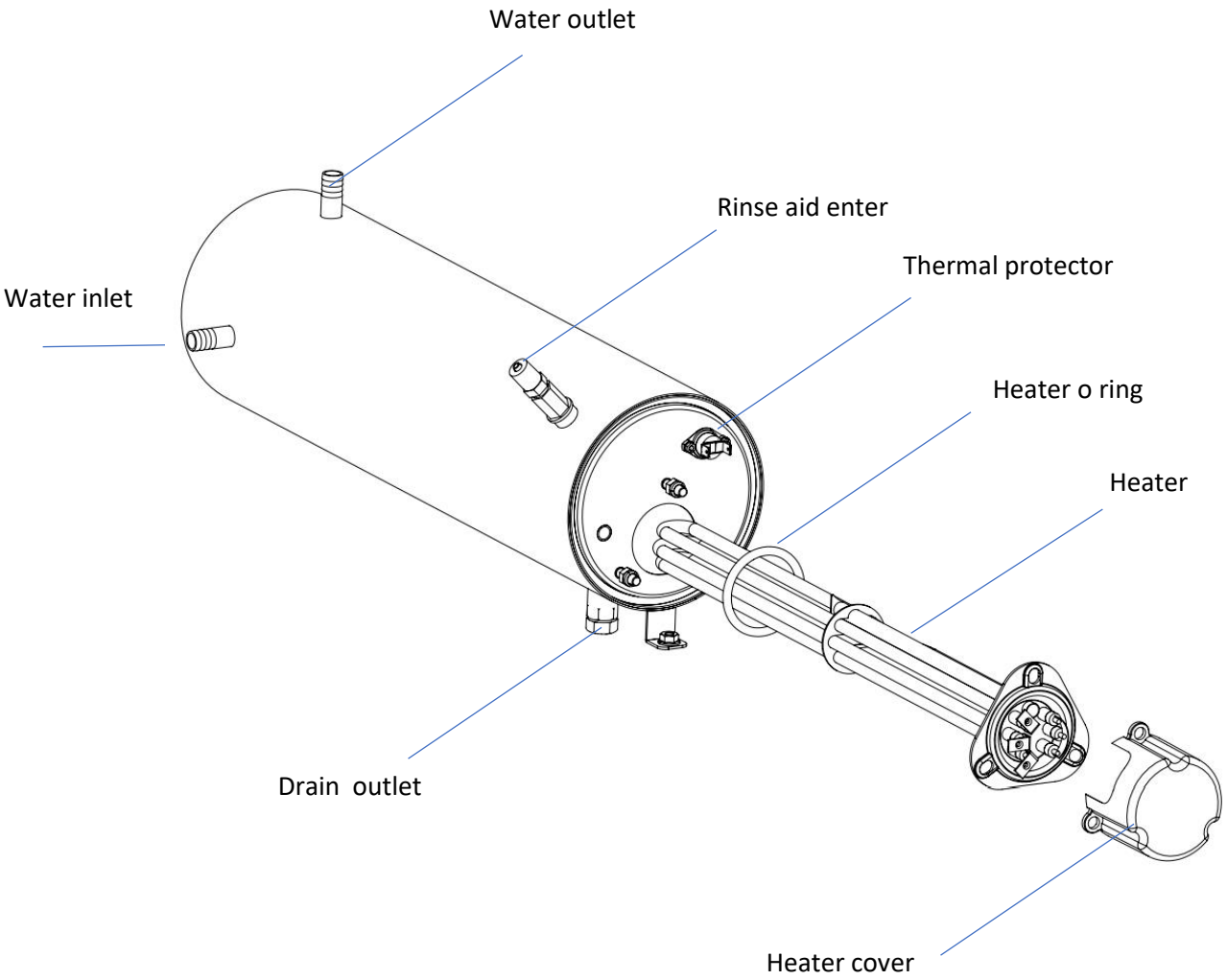
• The rinse water is sprayed by the rinse pump from the upper and lower rinse spray arms into the wash compartment.

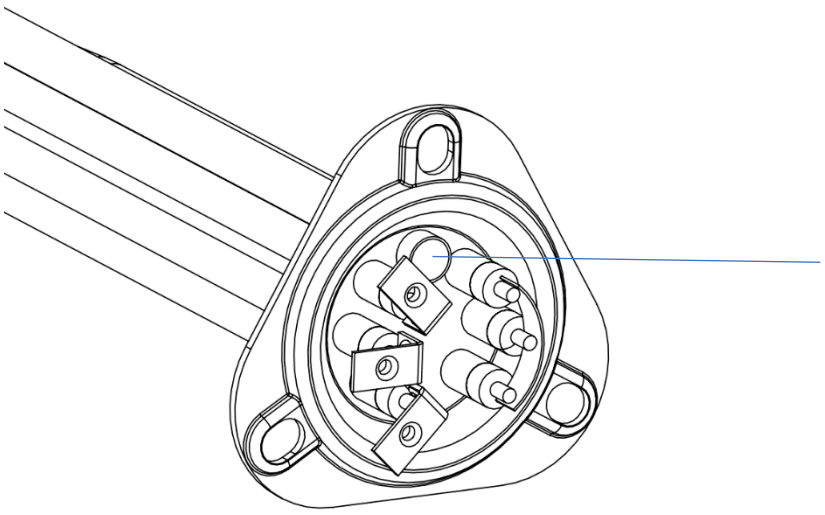
3-General İnformation for Dishwasher :



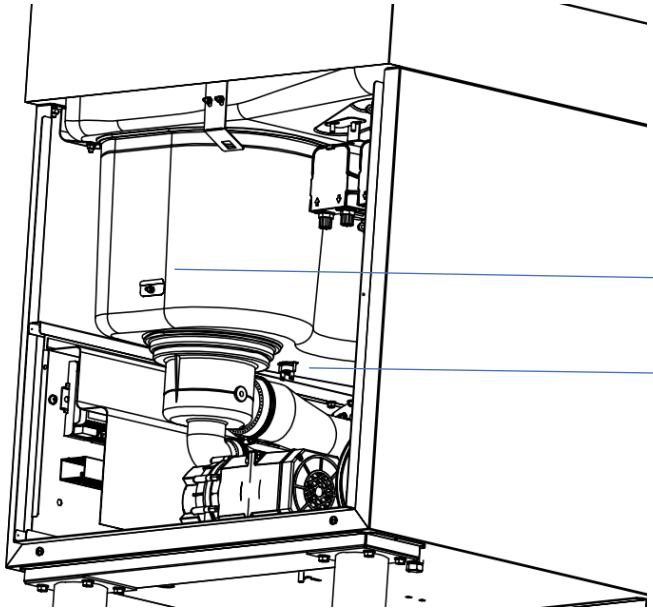

Door
Handle
Door switch
Wash tank
Control box
Rinse pump
İnternal booster tank
İnternal booster tank heater
Spring
Washing tank heater
Washing pump

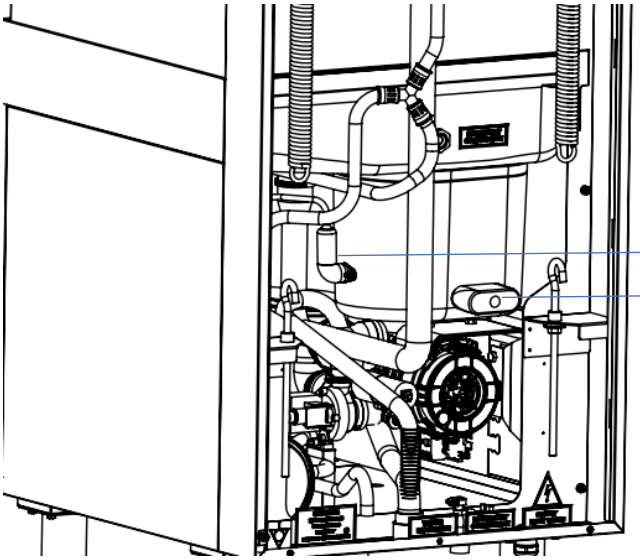
3.a-İnternal Booster Tank

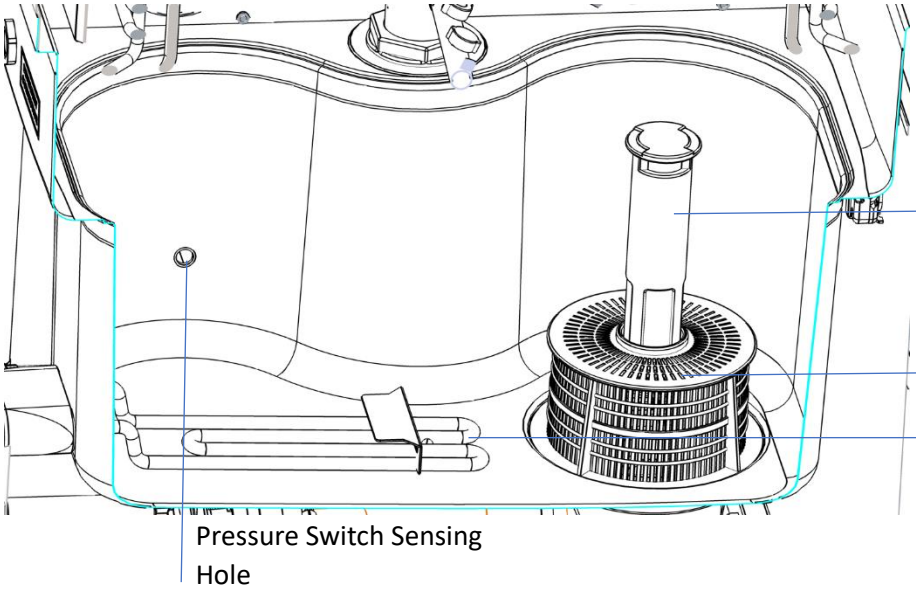




3.b Washing tank







4- Removal and Replacement of Components

1. This unit should be diagnosed and repaired only by qualified service personnel to reduce the risk of death, electric shock, serious injury, or fire.

2. Turn off the power supply before servicing. Lockout/Tagout to prevent the power from being turned back on inadvertently.

3. When draining the internal booster tank, wait until the water temperature falls below 40°C to avoid possible burns.

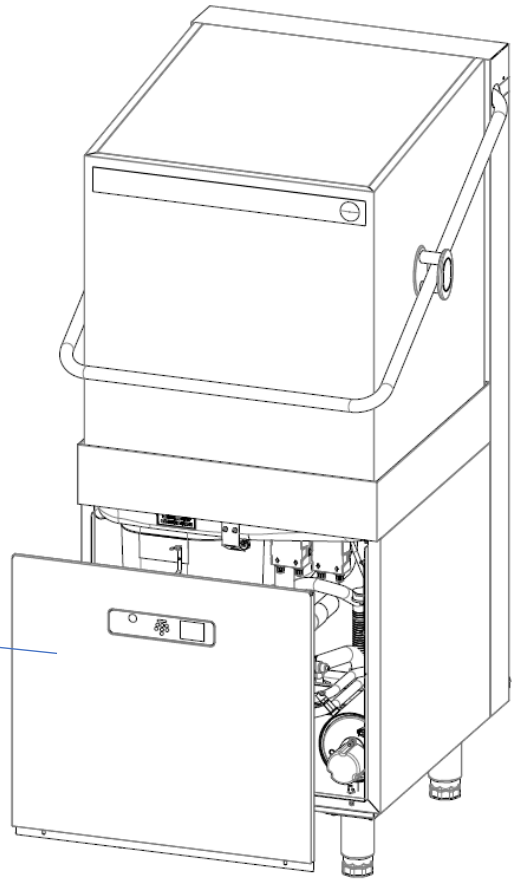
4. To avoid possible burns and spills, be sure to drain the wash tank and internal booster tank and let the components cool before servicing.

5. When disassembling components that have been in contact with detergent, wear rubber gloves and goggles. Before starting disassembly, thoroughly read the detergent safety instructions. Contact with skin may cause irritation and contact with eyes may cause blindness. 6. When reassembling components, be sure to use new O-rings and gaskets.

4.a. Removal of Front Panel

1) The front panel is secured with 2 screws. Unscrew and remove.
   Note: Be careful not to tension the operation board cable.

2) To replace, reverse the above procedure.

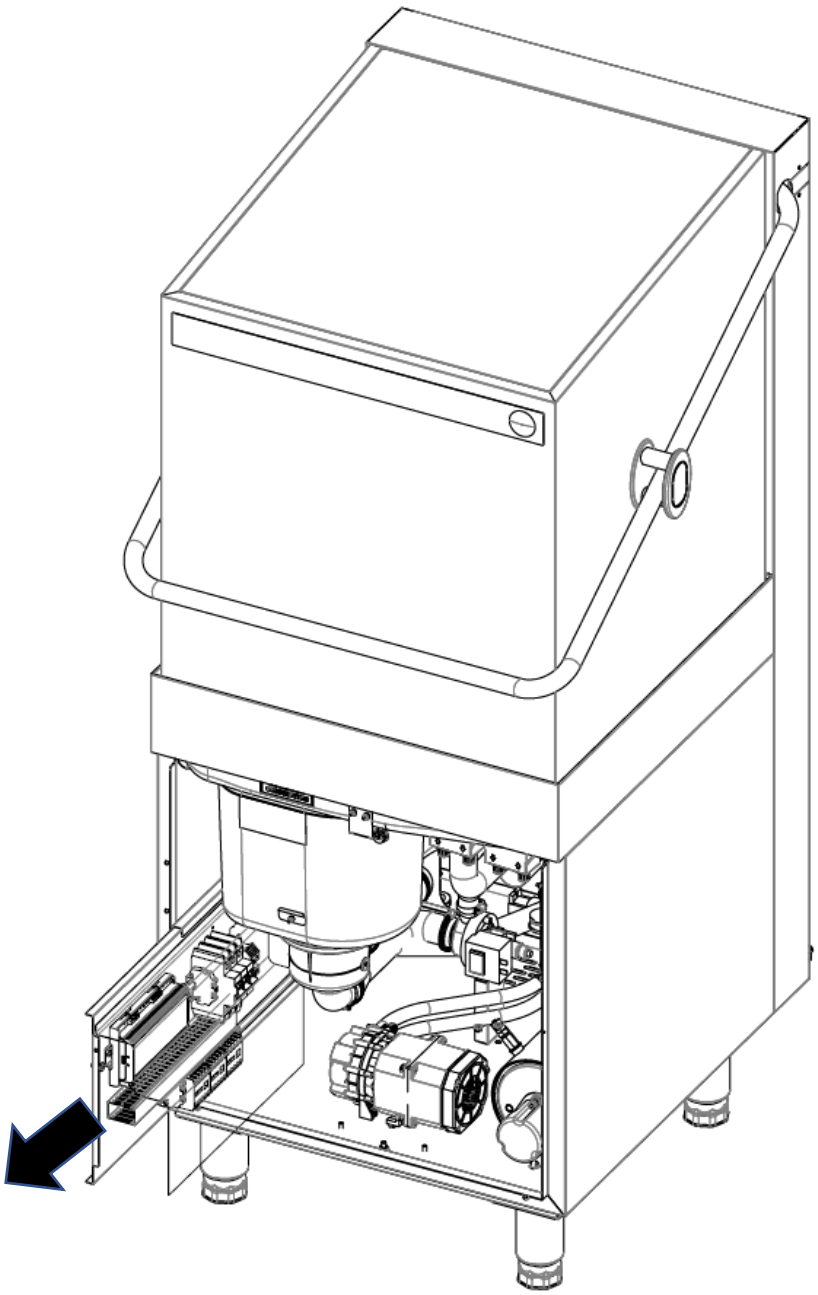


4.b. Accessing the Control Box

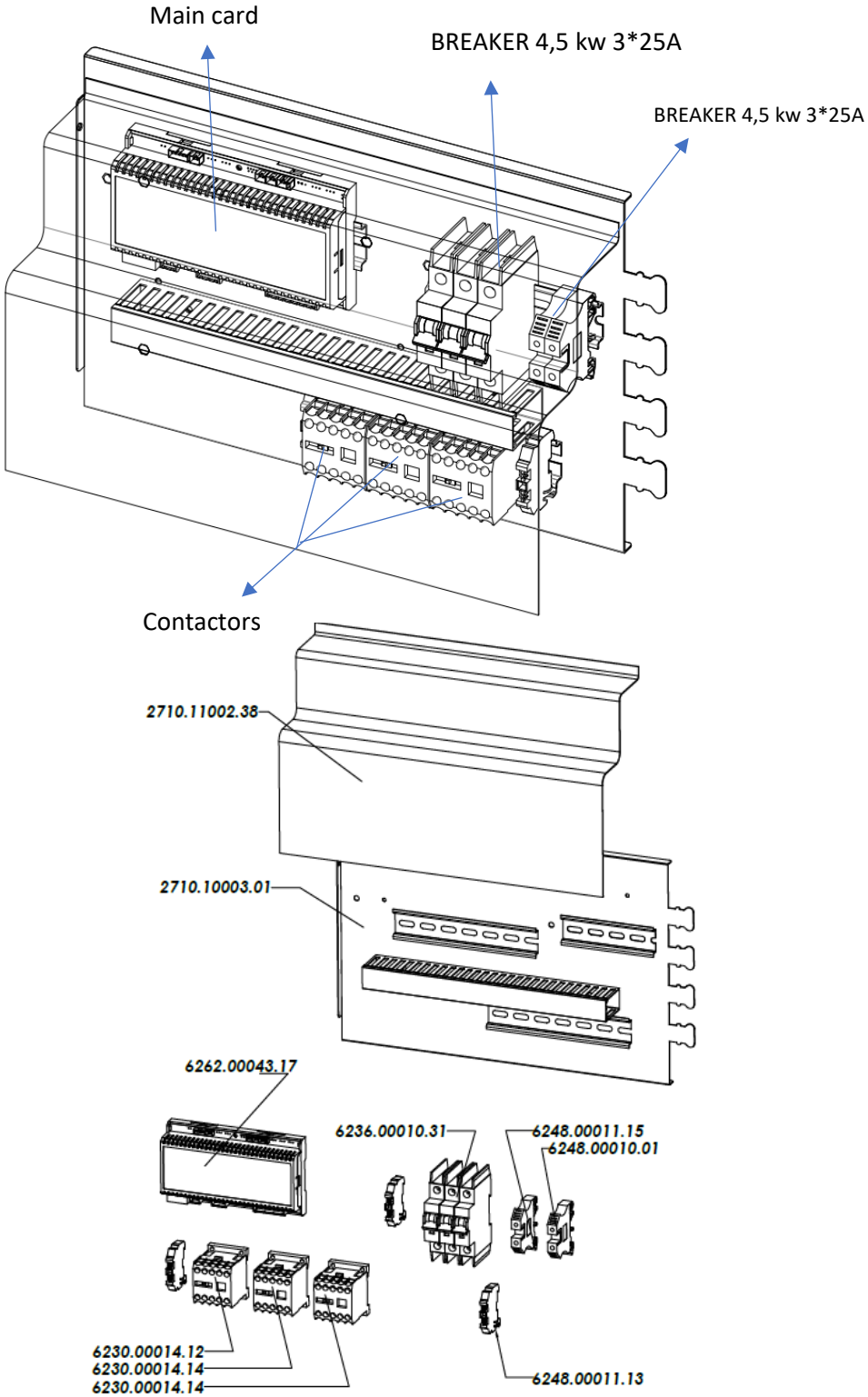
1) Remove the front panel.

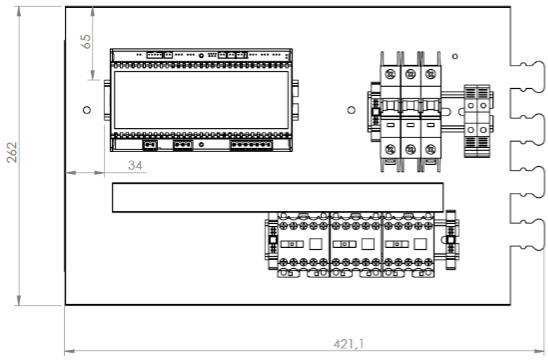
2) Pull out the control box slowly, then remove the PVC sheet to have access inside the control box. Note: Be careful not to tension the wires when pulling out the control box.

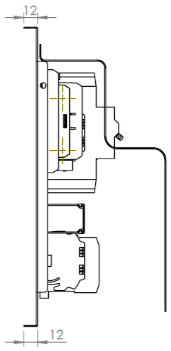
3) To replace, reverse the above procedure.



Touch Model







Hood Type Dishwasher- Electrical Group	
Part Description	**Part Code**
Electrical panel Group	2710.10003.01
CONTACTOR DILM 12-01	6230.00014.14
CONTACTOR DILEEM-10 XTMC6A10	6230.00014.12
Touch Power box	6262.00043.17
Pvc transparent curtain for electrical panel	2710.11002.38
Automat C CLS4-C25/3 (3x25A)	6236.00010.31
Terminal AVK 10 Blue	6248.00011.15
Teminal PEK-10 KLEMSA	6248.00010.01

4.c. Removal and Replacement of Internal Booster Tank

1) Turn off the power supply. Lockout/Tagout to prevent the power from being turned back on inadvertently.

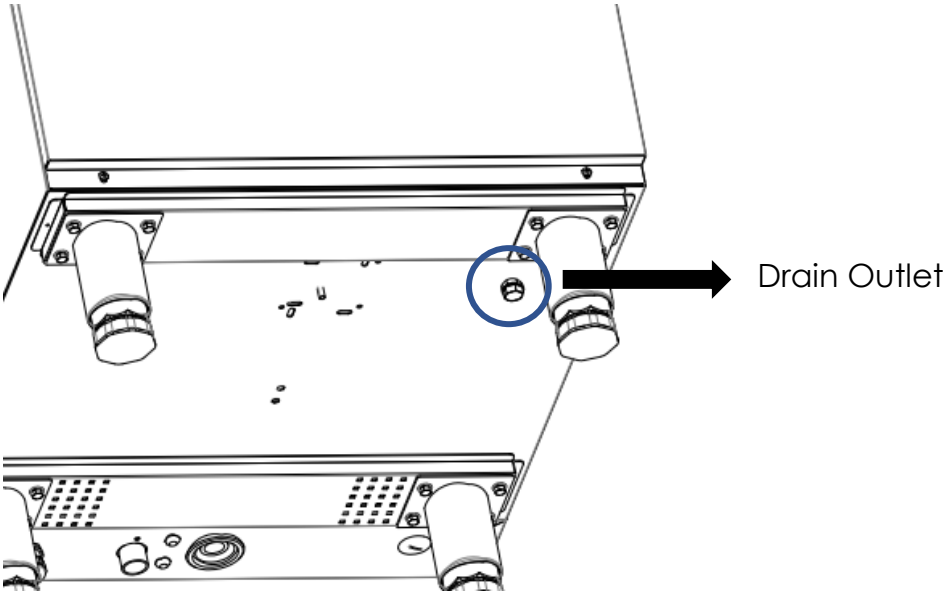
2) Close the water supply line shut-off valve.

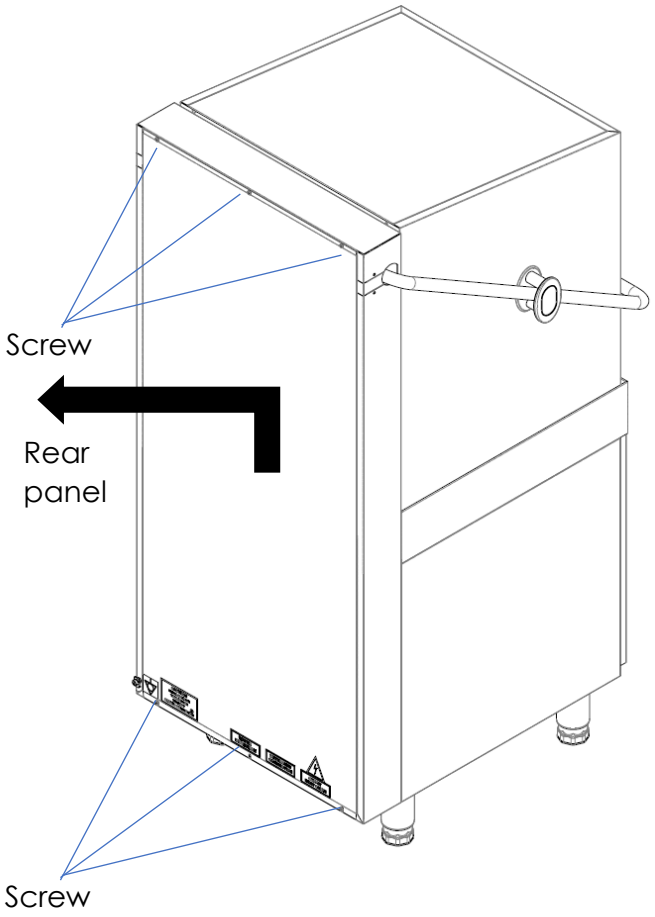
3) Drain the internal booster tank from the drain outlet (prepare a container)

> **⚠ WARNING**
>
> To avoid possible burns, allow the internal booster tank water temperature to fall below 40°C before draining.

4) Remove the front panel.

5) Pull the unit 1 m towards you.



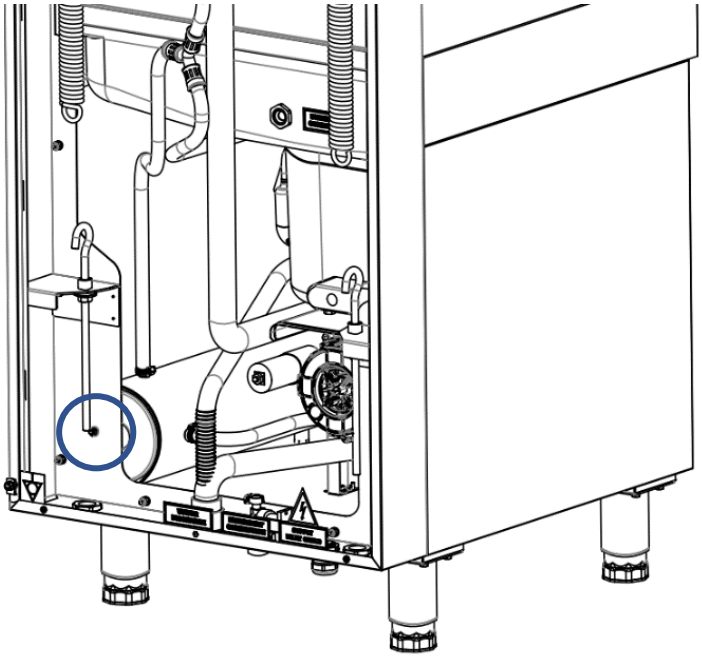


6) Remove the rear panel.

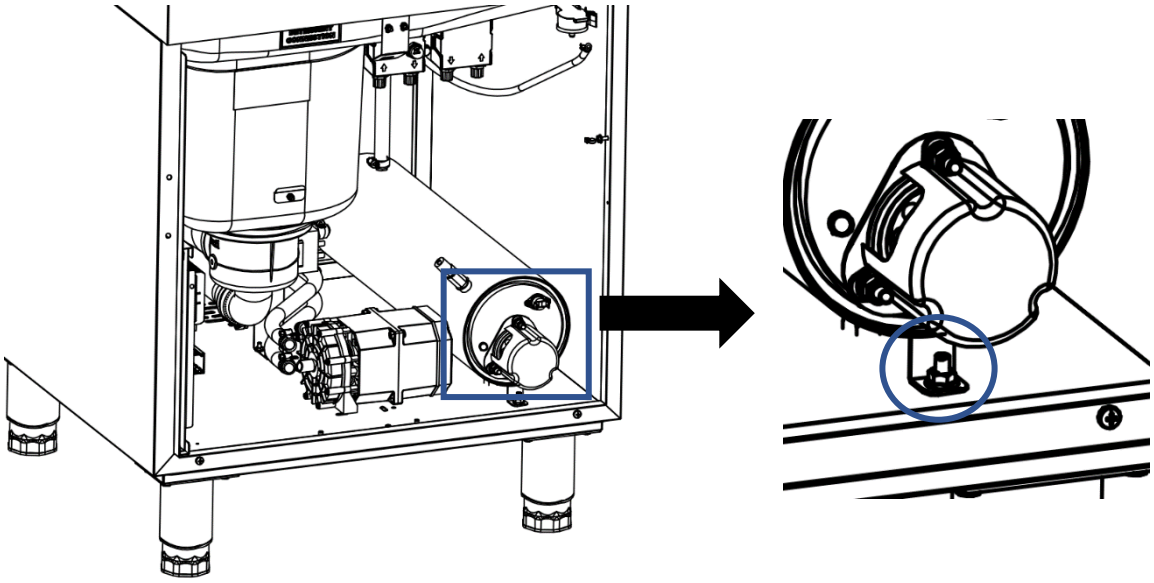
7) Loosen the hose bands, and remove the water supply and overflow hoses.

8) Remove the heater , bi metal thermostat switch and thermistor wires.

9) Remove the screw at the rear of the unit .



10) Remove the screw at the front of the unit and pull out the internal booster tank.



11) To replace, reverse the above procedure.

12) Make a trial run, and check for water leaks

3.d. Removal and Replacement of Wash Pump Motor

1) Turn off the power supply.
2) Pull out the drain pipe to drain water from the wash tank.
3) Remove the front panel.
4) Pull the unit 1 m towards you.
5) Remove the rear panel.

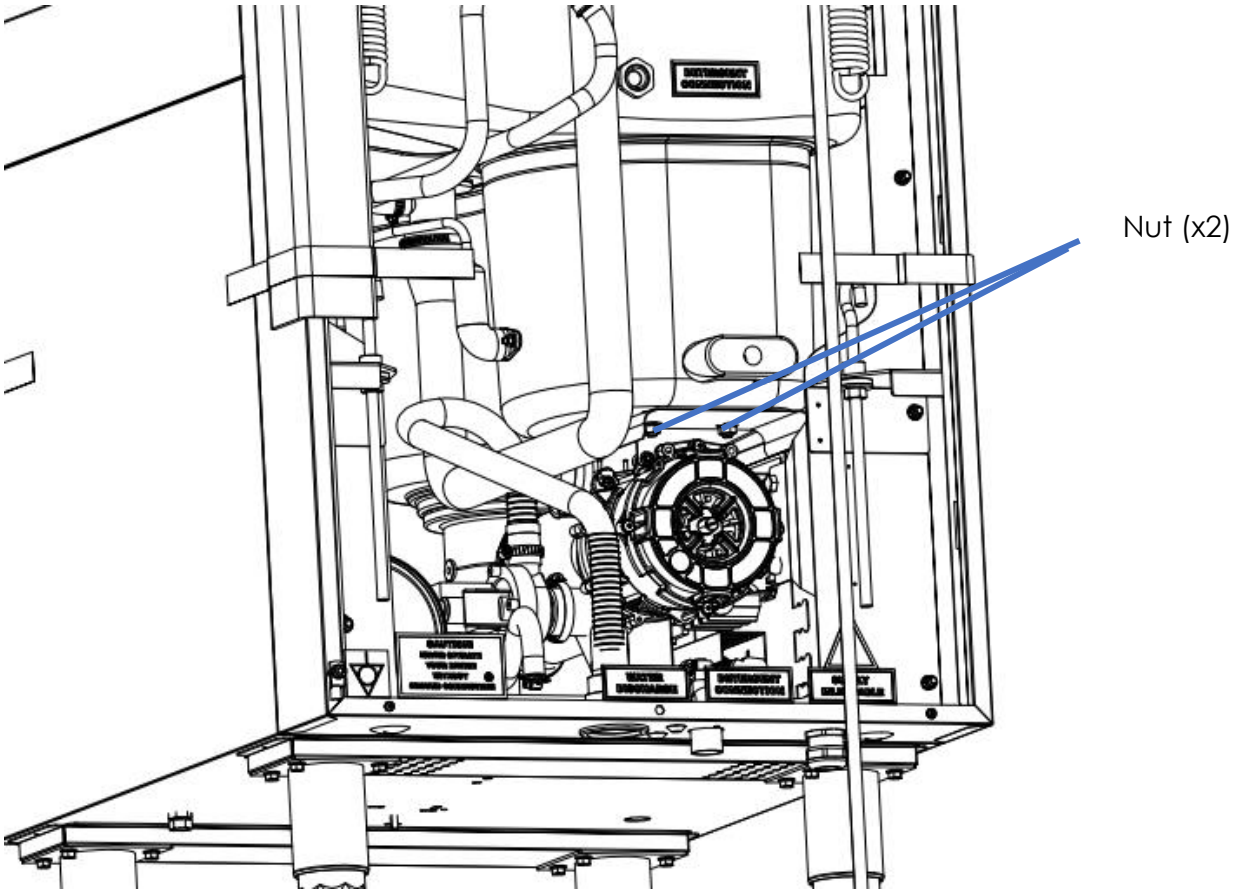
6) Disconnect the washing pump wires.

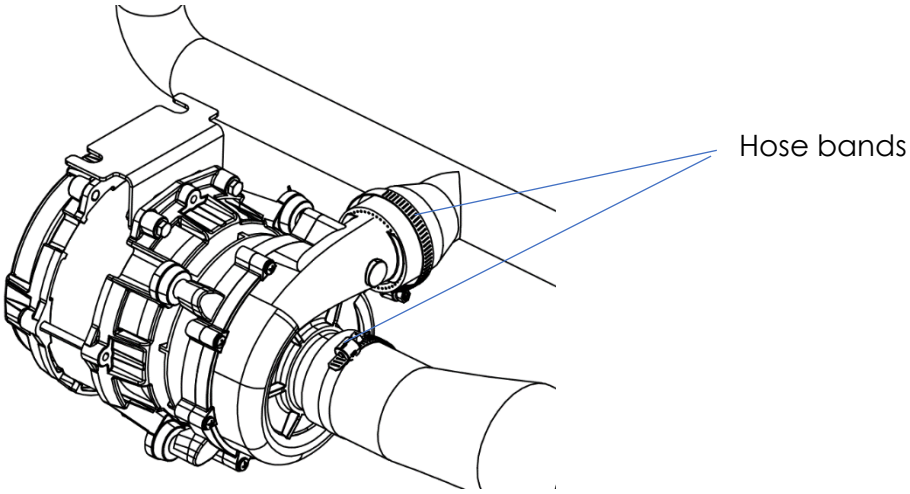
7) Loosen the hose bands, and remove the suction and discharge hoses.

8) Remove the two nuts, and disconnect the wash pump motor.

9) To replace, reverse the above procedure.

10) Make a trial run, and check for water leaks.





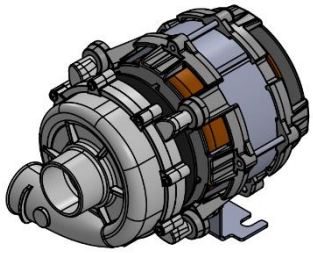
8) Remove the two nuts, and disconnect the wash pump motor.

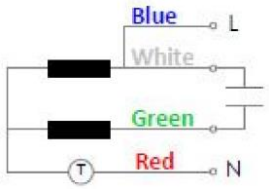
9) To replace, reverse the above procedure.

10) Make a trial run, and check for water leaks

Washing Pump tecnical info :

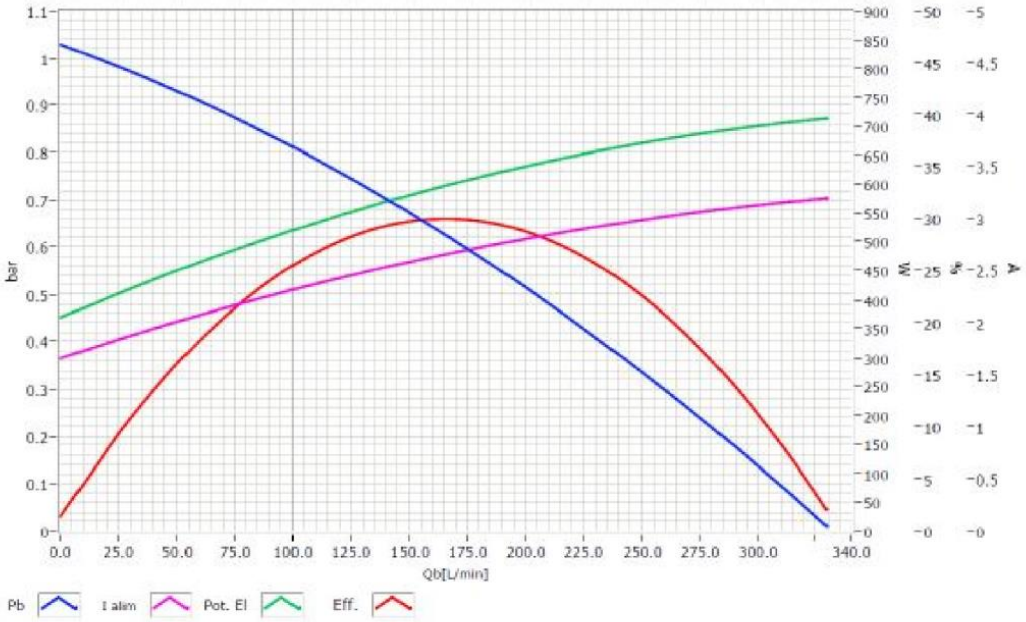
DATI TECNICI / *TECHNICAL DATA*		
Power supply		monofase *single-phase*
P1 input	[kW]	0.66
Voltage	[V]	230
Frequency	[Hz]	50
Current	[A]	2.9
Speed	[RPM]	2800
Capacitor	[uF]	12.5
Insulation class		F
IP protection		IP00
Duty		S1
n° poles		2
Thermal protection	[°C]	160 S05-160.05 THERMIK





CONNESSIONI / CONNECTIONS		
Blu/Blue	350mm	
Rosso/Red	350mm	
Bianco/White	350mm	
Verde/Green	350mm	

NB: All fastons with protection covers



Test eseguito a 230V 50Hz con acqua pulita a 20°C

Performance test at 230V 50Hz with clean water at 20°C

3.e. Removal and Replacement of Rinse Pump Motor

1) Turn off the power supply.

2) Pull out the drain pipe to drain water from the wash tank.

3) Remove the front panel.

4) Pull the unit 1 m towards you.

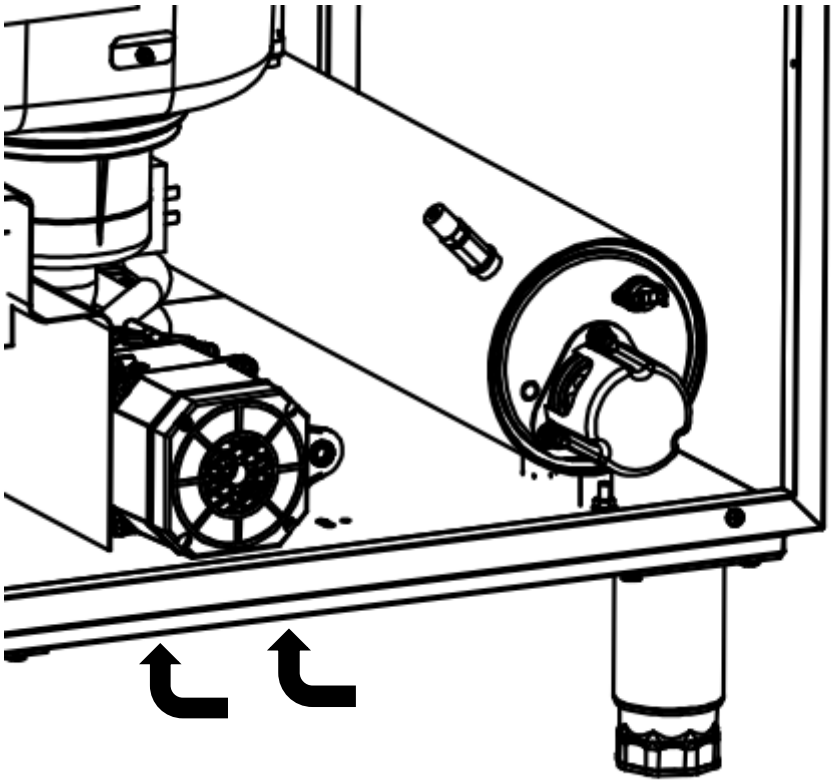
5) Disconnect the rinse pump wires.

7) Loosen the hose bands, and remove the hoses.

8) Remove the two screws (, and disconnect the rinse pump motor.

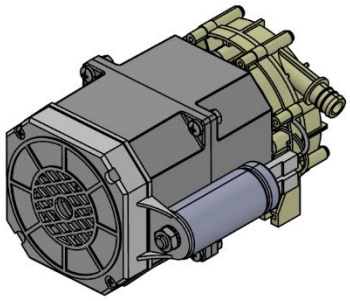
9) To replace, reverse the above procedure.

10) Make a trial run, and check for water leaks.



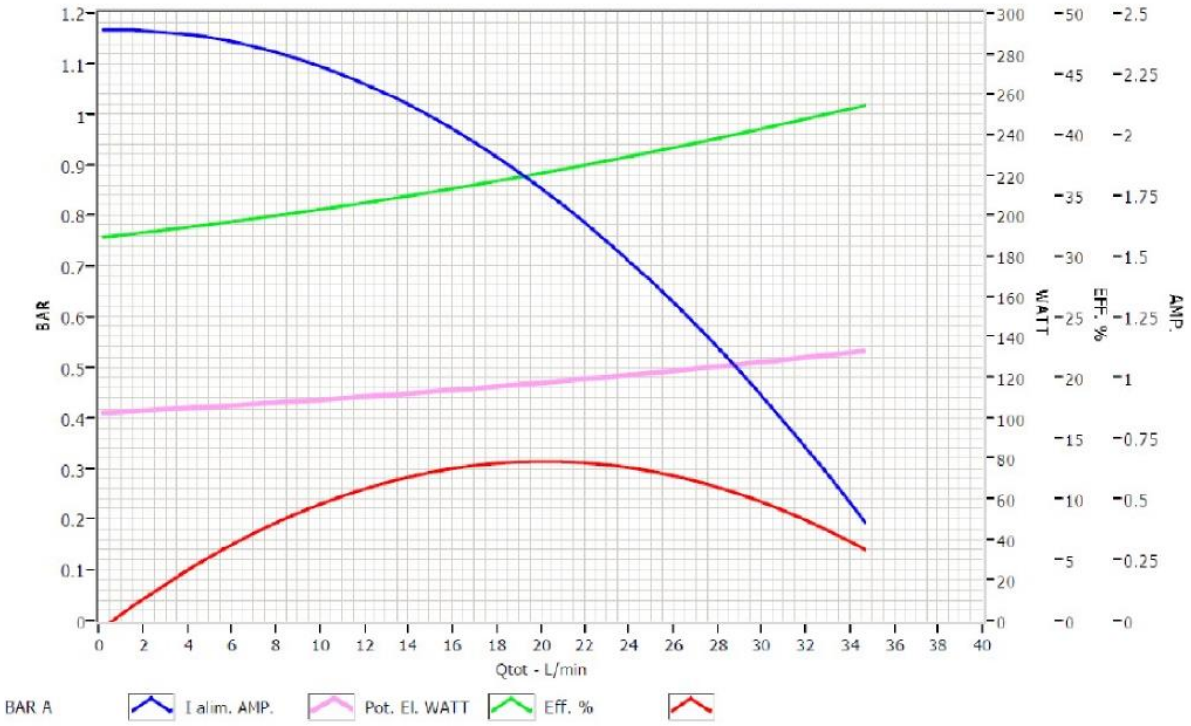
Rinsing Pump tecnical info :

Technical data **R63.T33PRSM**												
Ø *Inlet* (mm)	Ø *Outlet* 1 (mm)	Ø *Impeller* (mm)	*Power* (kW) - (HP)	*Voltage* (V)	*Current* (A)	*Frequency* (Hz)	(*rpm*)	*Insulation Class*	*Protection Class*	*Duty*	*Thermal protection*	*Weight* (kg)
15	14	90 (*Closed*)	0,25 - 0,33	230±10%	1,25	50	2800	F	IP20	S3	150±5 °C	3,1



Connessioni *Connection*			
Rosso *Red*	L	L=350	
Blu *Blue*	N	L=370	
Bianco *White*	Condensatore *Capacitor*	L=200	
Verde *Green*		L=200	
Giallo-verde *Yellow-green*	⏚	L=370	

Condensatore *Capacitor*
8 µF ±5% 425V 10000h cl.B 475V 3000h cl.C P2



3.f. Removal and Replacement of Door

1) Open the door. Put some racks or other objects under the door to prevent it from closing.

2) Remove the bracket at the back of the door.

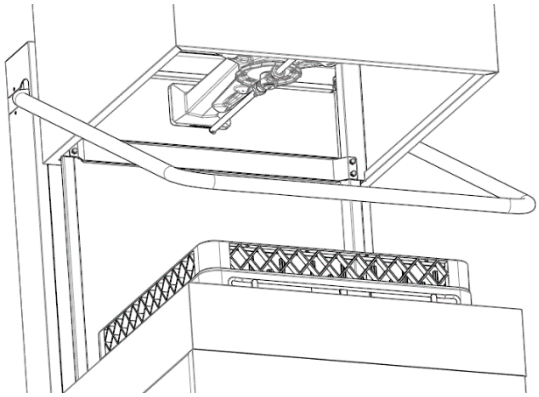
3) From inside the door, unscrew and remove the door handle side guide on both sides.

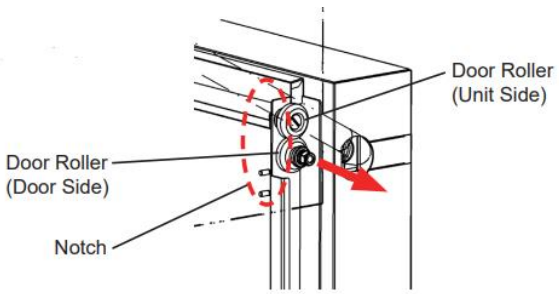
4) Lift up the door, and remove the door roller (door side) from the notch in the unit to the outside.

5) To replace, reverse the above procedure.

6) Check the door for proper movement.

> **⚠ WARNING**
>
> 1. To avoid injury, be sure to put some racks or other objects under the door. The door may drop or the handle may spring back when the door handle side guides are removed.
>
> 2. The door is heavy. Be sure to handle it with care.





3.g.Removal and Replacement of Spring

1) Pull the unit 1 m towards you.

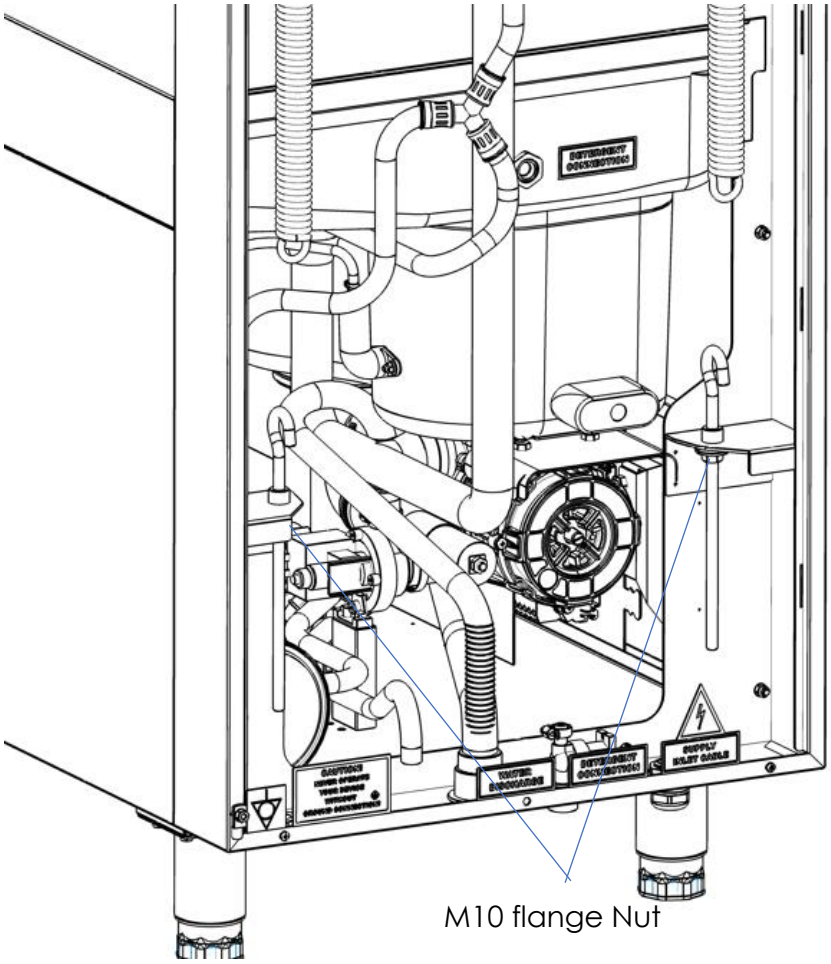
2) Remove the rear panel.

3) Remove the M10 flange nuts positioning the springs.

4) Remove the springs.

5) To replace, reverse the above procedure.

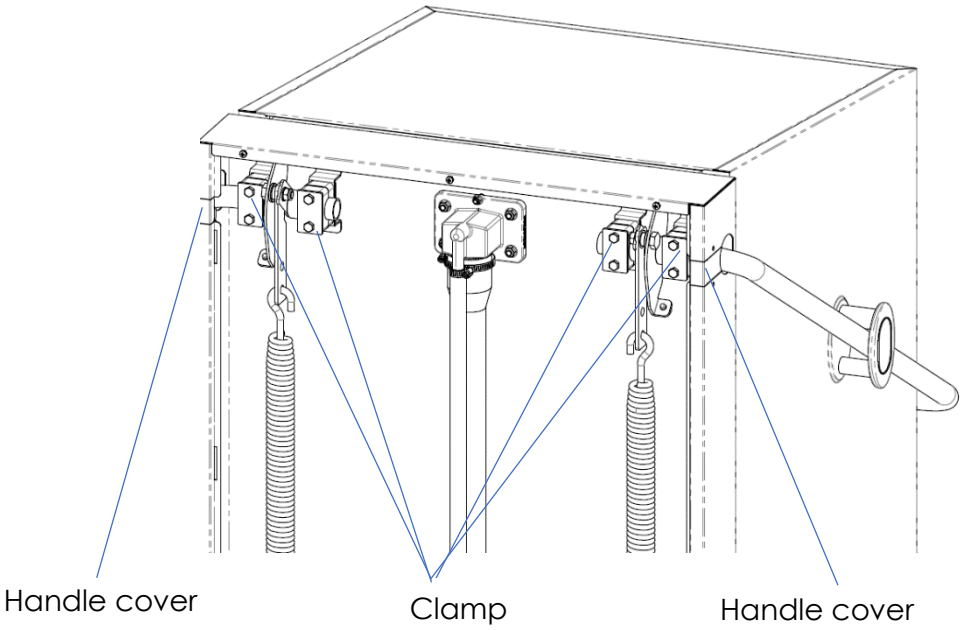
6) Check the door for proper movement.

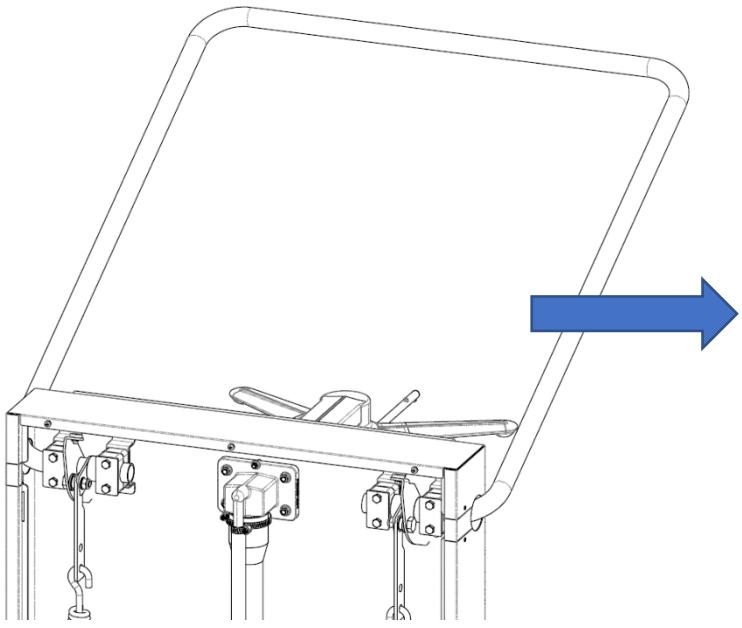


M10 flange Nut

3.h. Removal and Replacement of Handle

1) Remove the door. See "3.F. Removal and Replacement of Door."
2) Remove the springs. See "3.G. Removal and Replacement of Spring."
3) Remove the handle cover on both sides.
4) Remove the 8 bolts securing the clamps.
5) Slide off the handle to the back.
6) To replace, reverse the above procedure.
7) Check the door for proper movement.



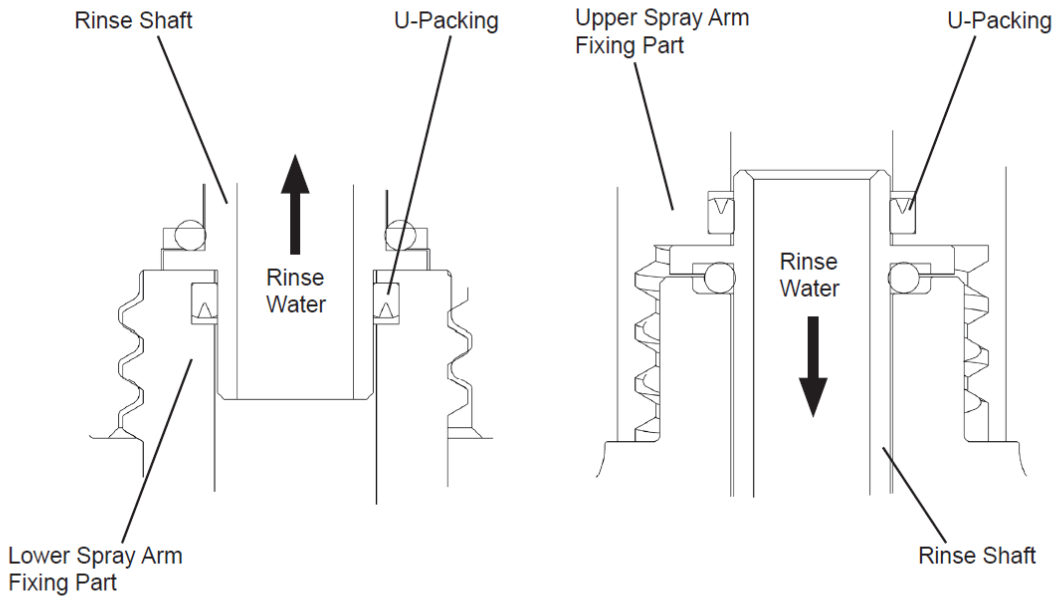


I. U-Packing Installation Instructions

⚠ WARNING

Incorrect installation of the U-packings will cause water leaks.

Header (Rinse Spray Arm) and Double Pipe Connection



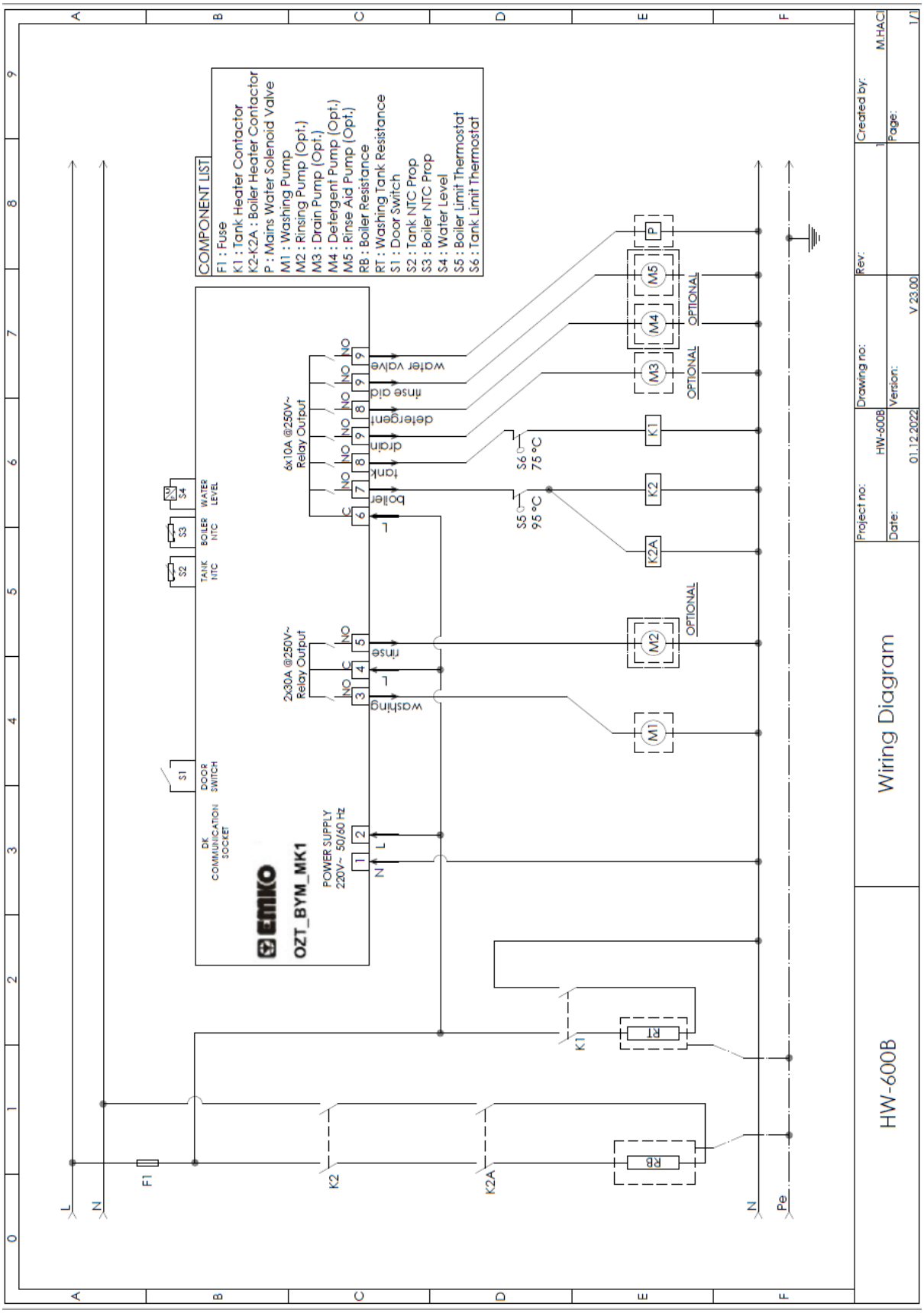
Lower Spray Arm

Correct Installation

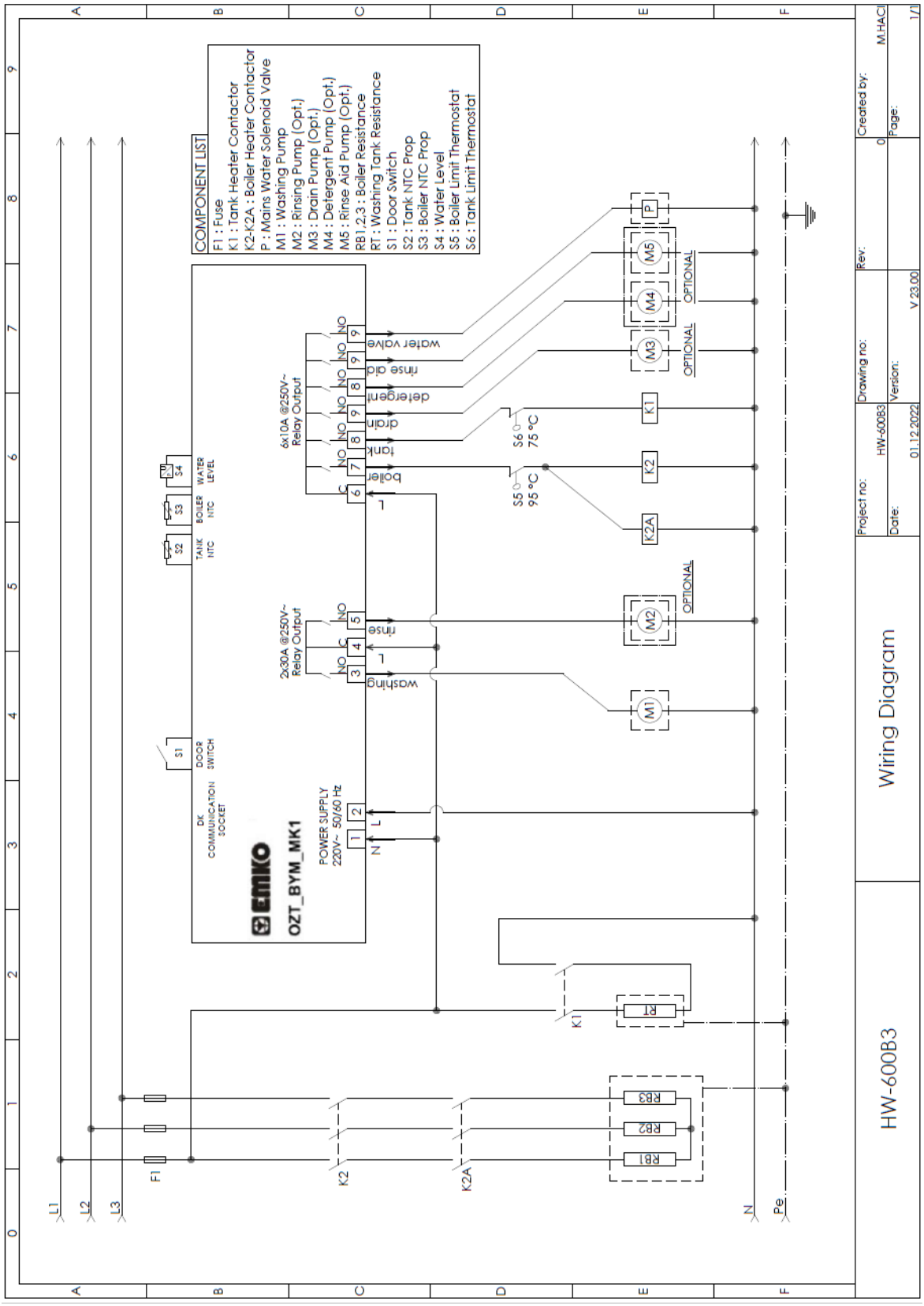
Upper Spray Arm

Correct Installation

5.a Electrical Diagram (HW600B) :



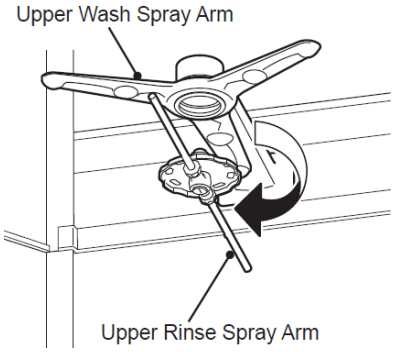
5.b Electrical Diagram (HW600B3) :



6. CLEAN-UP AND MAINTENANCE

6.1 Periodical Maintenance and Clean-up

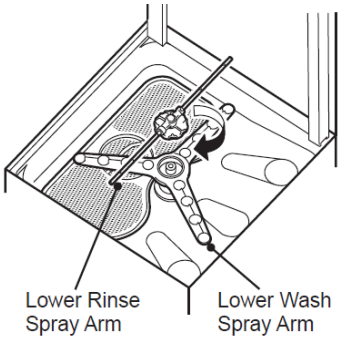
Daily maintenance should be carried out by people informed about the safety instructions as following, after disconnecting power supply and water connections.

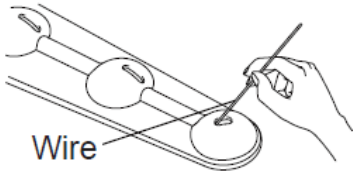


6.1.1 Daily Maintenance:

Daily maintenance should be carried by the user. In order to clean up the machine within the day following should be carried out periodically after the washing operation:

1. Wash and rinse arms should be disconnected and the scraps remaining in those arms should be removed away using pressure water, brush, fine wire etc. and reinstalled back to their places.
2. Scraps remaining in the washing tank should be removed and cleaned up. (Do not carry out washing operation without installing scrap filters)
3. If the period between two washing operations exceeds "5 Hours" water outlet pipe should be disconnected and all of the water should be drained out fully.
4. Suction filter should be disconnected and cleaned up with plenty of water.
5. Inside of the tank should be cleaned up with a sponge or cloth and plenty of water.
6. After cleaning operation is finished suction filter, water outlet pipe, scrap filters and washing and rinsing arms should be reinstalled.
7. Scale formed on the carriers of the device after certain period of use, must be wiped away. If it is not cleaned up for a long time, scale formed on the carriers of the device, hinder the free movement of the hood.

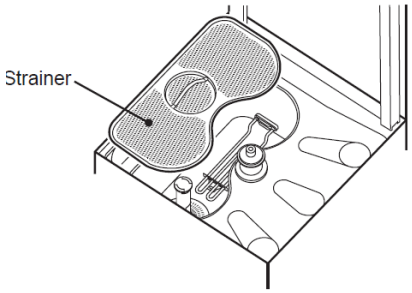




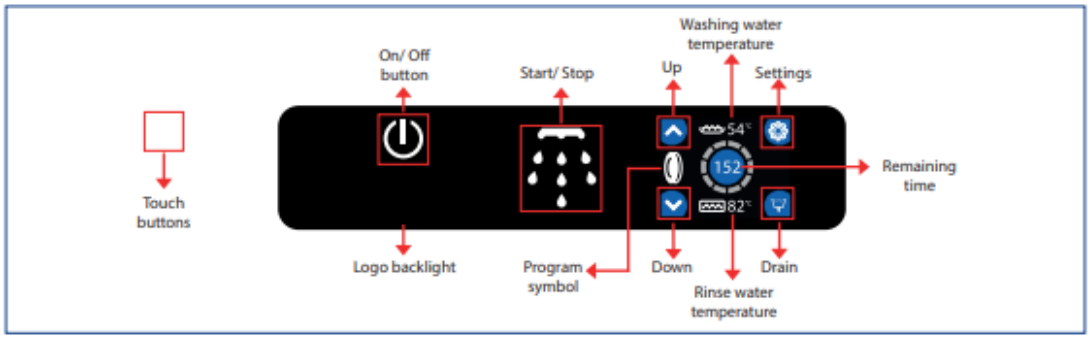
6.1.2 Periodical Maintenance:

Periodic maintenance should be carried out by the user at least once in a month, after the cleanup and maintenance that must be conducted after each washing operation is completed. This should be done when the machine is ready for operation and before the dishes are set up in the machine. After ½ kg's of decalcination substance is added to the washing tank, the machine is operated for ½ hours so that it cleans itself up. Afterwards the water within the machine is disposed and then refilled with fresh water. This time the machine is operated without any additive substance only with water for ½ hours and after the water inside is disposed, the machine will be ready for operation.

If the device is not used for long period of time, you must drain the water left inside the boiler. For this purpose, let the water drain out after opening the tap (boiler tank tap) at the lower part of the devices body. Other wise, water staying inside too long, may harm the resistances.



7- Touch Quick user manual



1 **ON-OFF**

Press and hold for 3 seconds to turn on the machine when the On/Off button illuminates white.

2 **FILLING**

Drops begin to glow blue and move below to up.

Blue fields show water filling amount.

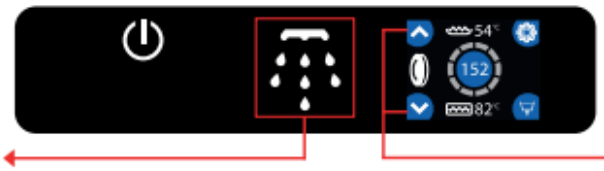
3 **HEATING**

Red drops move below to up. Indicates that the tank and boiler water temperature in this product is heating up.

Red fields show water heating temperature.

4 **READY TO WASH**

Machine is ready to use when the white drops illuminated.



Up and down arrows are for washing program sellection.

5 **WASHING**

Green drops move from left to right, indicating that the machine is washing.

Tank temperature

Remaining time for washing

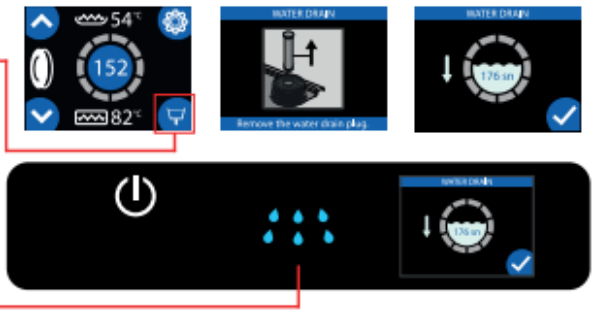
Boiler temperature

6 **DRAIN**

To start the drain, the drain button is pressed. The drain plug is removed.

Blue drops move up and down while draining.

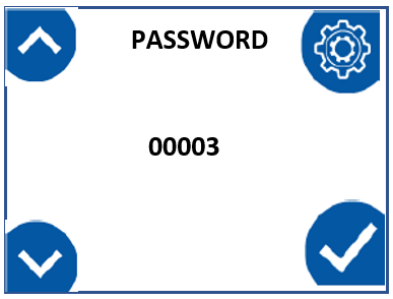
After the drain has started, the start-stop button is pressed to cancel it.



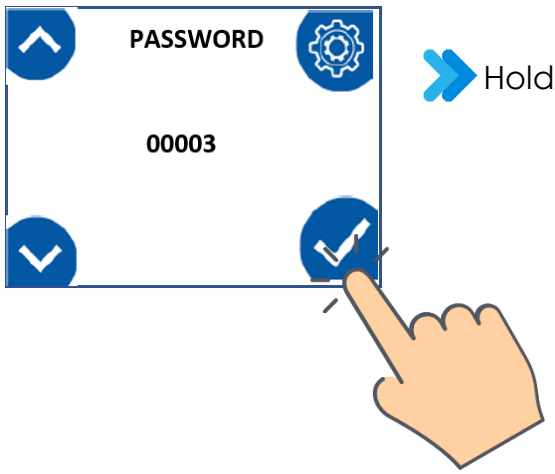
Accessing The Settinse Menu of Touch Panel

Press and hold the settings icon for 3 sec.

You will see the pasword screen.Enter “3” for password.



Use up and down buttons to enter “3”.
will see the pasword screen.Enter “3” for password.



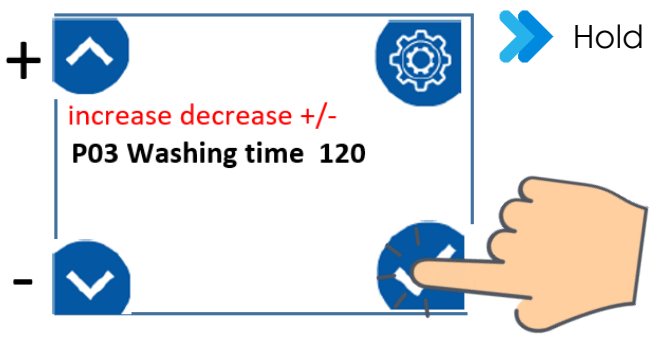
Hold 3 sec. approve icon To confirm.

Changing Parameters

Access the setting menu.

Choose the program that you want to change.

Use settings icons , to change the paremeters



Hold 3 sec. approve icon To confirm.

Service Menu Chart

By using the settings menu you can reach the below values.

Service Menu Chart								
Service Menu	**Item and details**	**Setting range**	**Display**	**Factory Default**				
P01	Tank Temperature Set	4 to 100x1 degree	4 to 100	55 °C	55 °C	55 °C	55 °C	55 °C
P02	Boiler Temperature Set	4 to 100x1 degree	4 to 100	80 °C	80 °C	80 °C	80 °C	80 °C
P03	Washing Time	1 to 250x1 second	1 to 250	40 Sec.	90 Sec.	120 Sec.	140 Sec.	180 Sec.
P04	Rinse Time	1 to 250x1 second	1 to 250	10 Sec.	10 Sec.	10 Sec.	10 Sec.	10 Sec.
P05	Waiting Time After Washing	1 to 250x1 second	1 to 250	2 Sec.	2 Sec.	2 Sec.	2 Sec.	2 Sec.
P06	Evacuation Time During Rinse	1 to 250x1 second	1 to 250	40 Sec.	40 Sec.	40 Sec.	40 Sec.	40 Sec.
P07	Max Water Level	1 to 100	1 to 100	30%	30%	30%	30%	30%
P08	Getting Detergent Time	1 to 250x1 second	1 to 250	10 Sec.	10 Sec.	10 Sec.	10 Sec.	10 Sec.
P09	Getting Polish Time	1 to 250x1 second	1 to 250	10 Sec.	10 Sec.	10 Sec.	10 Sec.	10 Sec.
P10	Evacuation Time	1 to 250x1 second	1 to 250	150 Sec.	150 Sec.	150 Sec.	150 Sec.	150 Sec.
P11	Dirtiness Counter	1 to 250x1 times	0 to 250	15 Times	15 Times	15 Times	15 Times	15 Times
P12	Temperature Hysteresis	1 to 10x1 degree	1 to 10	1 °C	1 °C	1 °C	1 °C	1 °C
P13	Extra Time For Water Filling	1 to 250x1 second	1 to 250	25 Sec.	25 Sec.	25 Sec.	25 Sec.	25 Sec.
P14	Pressure Level	3 levels	1 to 3	3	3	3	3	3
P15	Tank Preheating	0 : Tank preheating is off 1 : Tank preheating is on	0 or 1	1	1	1	1	1
P16	Temperature Unit	Celsius or Fahrenheit can be choosen	Celsius or Fahrenheit	Celsius	Celsius	Celsius	Celsius	Celsius
P17	Start By Door	0 : Stand by / Cleaning button 1 : Doorswitch	0 or 1	1	1	1	1	1
P18	Water Level Set	2 to 100	2 to 100	10	10	10	10	10
P19	Water Level Hyst	1 to 10	1 to 10	1	1	1	1	1
P20	Less water detection time	1 to 120x11 second	1 to 120	5	5	5	5	5
OP0	Factory Default	0 : standard 1 : Restore factory settings	0 or 1	0	0	0	0	0
OP1	Service Counter	0 to 1000000 times	0 to 1000000	0 Times	0 Times	0 Times	0 Times	0 Times
OP2	Factory Counter	0 to 1000000 times	0 to 1000000	0 Times	0 Times	0 Times	0 Times	0 Times
OP3	Buzzer On	0 : Buzzer is on. 1 : Buzzer is off.	0 or 1	1	1	1	1	1
OP4	Password	0 to 1000000 number	0 to 1000000	3	3	3	3	3
OP9	Diagnostic	0 to 1000000	0 to 1000000	0	0	0	0	0

P01 Tank Temperature set :

Tank temperature value can be adjusted from settings menu.The value can be between 4 °C and 100 °C. This setting is made separately for each program.

P02 Boiler Temperature set :

Boiler temperature value can be adjusted from settings menu.The value can be between 4 °C and 100 °C. This setting is made separately for each program.

P03 Washing Time :

Washing time can be adjusted from settings menu.The value can be between 1 second and 250 second. This setting is made separately for each program.

P04 Rinse Time :

Rinsing time can be adjusted from settings menu.The value can be between 1 second and 250 second. This setting is made separately for each program.

P05 Waiting Time After Washing:

Waiting Time After Washing can be adjusted from settings menu.The value can be between 1 second and 250 second. This setting is made separately for each program.The default value of this setting is "2"seconds. The reason why there is a waiting period before the rinsing time is to prevent the droplets from the washing process from falling on the dishes after the rinsing process has started.

P06 Evacuation Time During Rinse:

Evacuation Time During Rinse can be adjusted from settings menu.The value can be between 1 seconds and 250 seconds. This setting is made separately for each program.
A washing program includes 3 steps ;

1-Washing period (changes acording to programme) 2 - Waiting period (2 seconds)

3- Rinsing period (usually 10 seconds)

Machine gets extra water in ever rinsing period and this extra water drains from overflow pipe.With this setting drain pump starts to run during rinse period as the time that is setted.

P07 Max Water Level:

With this setting, you can adjust max water level point.When this setting is reached, the drain pump in the machine starts to work to drain the excess water.

P08 Getting detergent time - P09 Getting Rinse aid time :

Detergent and rinse aid pumps are timed. It can be adjusted between 0 and 250 seconds. This means that the rinse aid / detergent is given to the system as much as the set value (seconds) you entered.

(rinse aid to boiler, detergent to washing tank). Detergent and rinse aid pumps start working during the rinsing process and work until they are set and then stop.

P10 Evacuation (drain) time :

When the draining process is started to drain all the water in the machine, the drain pump operates for the time entered value.

P11 Dirtiness Counter :
It reminds that the water in the washing tank should be changed. It counts the entered value, and when the entered value is filled, the icon "  "appears on the screen, when all the water in the machine is drained, the icon "  " on the screen disappears.

P12 Temperature Hysteresis :
Precision of temperature measurement control.

P13 Extra Time For Water Filling :
Apart from the required amount of water, it takes water for the extra time entered. This setting is set at the factory. (When the machine takes the first water, the desired amount of water is collected in the washing tank in the first run, since the washing hoses are empty, less water returns while returning to the washing tank, therefore, during the first washing program, the machine may stop working and try to take water, this setting prevents this)

P14 Pressure Level :

This feature is not active now

P15 Tank preheating :

If you set "0" tank preheating ;

If you start your machine the washing programme that you have selected will run without not waiting set temperature values. (boiler and wash tank temperature values).

If you set "1" tank preheating ;

If you start your machine the washing programme that you have selected will not run without reaching the set temmerature values. (boiler and wash tank temperature values).

P16 Temperature unit :

It changes the temperature unit of your machine, you can use either Fahrenheit or Celcius units.

P17 Start bye door :

If you set "0" this value ;

To start washing programme you should touch the drop icon on control panel screen.

If you set "1" this value ;

To start the washing program, it will be sufficient to close the door/hood of the machine.

P18 Water Levet set :

Water level is adjusted , this value is entered in the factory.

P19 Water levet Hysteresis :
Precision of water measurement control.

P20 Less Water detection time:

The minimum amount of water required in the machine can be adjusted. In order for the water to remain above the washing tank resistance.(for safety)

OP0 Factory Default	If the factory default is set to 1, all settings made on the machine will return to the factory settings.
OP1 Service Counter	When the service performs an operation on the machine, it resets this field and if the machine has a problem again, it is seen how long the machine has worked between the two service times.
OP2 Factory Counter	It shows how many times the machine has been operated during its lifetime.
OP3 Buzzer on	You can make "off" or "on" the buzzer.
OP4 Password	You can change the password as you will.
OP9 Diagnostic	This is done in production line , to introduce the water zero point to the digital pressure switch.