
Commercial Door Type Dishwasher (High Temp)

Installation and Operation Manual

Model: HZ-DH60



WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

**Please read and keep these instructions. Indoor
use only**

Ensure suitable water hardness of 1.5~4.3gpg (20~75mg/L)

Ensure thorough pre-washing of tableware.

Ensure only detergents recommended by professional chemical companies are used.

Ensure the machine is thoroughly cleaned, rinsed, and dried (with the door

open) at the end of each working day.

Ensure limescale is removed regularly according to the chemical company's requirements.

Ensure only products declared safe for stainless steel are used.

Do not use water that is too soft (recommended water hardness range: 25-75 mg/L).

Do not use household dishwashing detergents.

Do not allow food residues to accumulate at the bottom of the water tank.

Do not let detergents, disinfectants, quick-drying agents, or descaling agents exceed the concentrations recommended by the chemical manufacturer.

Do not use steel wool to clean tableware or the surface of the dishwasher.

Do not allow foreign objects to enter the machine, especially metal objects.

Do not rinse the exterior of the dishwasher with a faucet or other water source.

Note: If the equipment is installed or repaired by unauthorized personnel, or if any non-original spare parts are used, or if any unauthorized technical modifications are made to the machine, the manufacturer's warranty and product liability will become void.



Do Not Connect To Hot-Water Supply Exceeding A Temperature of 140°F

CONTENTS

1	
OVERVIEW.....	4
2 PLAN VIEW	
.....	4
3 INSTALLATION	
.....	5
4 OPERATION	
.....	10
5	
MAINTENANCE.....	14
6 TROUBLESHOOTING GUIDE.....	16
7 SCHEMATIC DIAGRAM.....	17

1 OVERVIEW

This equipment is a semi-automatic rack dishwasher, the insulated door is opened to push in or pull out the rack. When the water level of the water tank is normal, the machine will automatically start cleaning and spraying cycle after closing the door; when the water tank is short of water, the machine will automatically fill water after closing the door, and automatically turn to cleaning and spraying cycle after reaching the normal water level.

The dishwasher is 850 mm high and has adjustable feet, so please note this when ordering. The machine has a built-in 9kW closed electric heating tank, an open 3KW electric heating cleaning tank, the main washing electric heating pipe and the rinsing electric heating pipe interlock, equipped with rinsing pump, built-in distributor, water inlet filter and solenoid valve.

Fig 1



2 PLAN VIEW

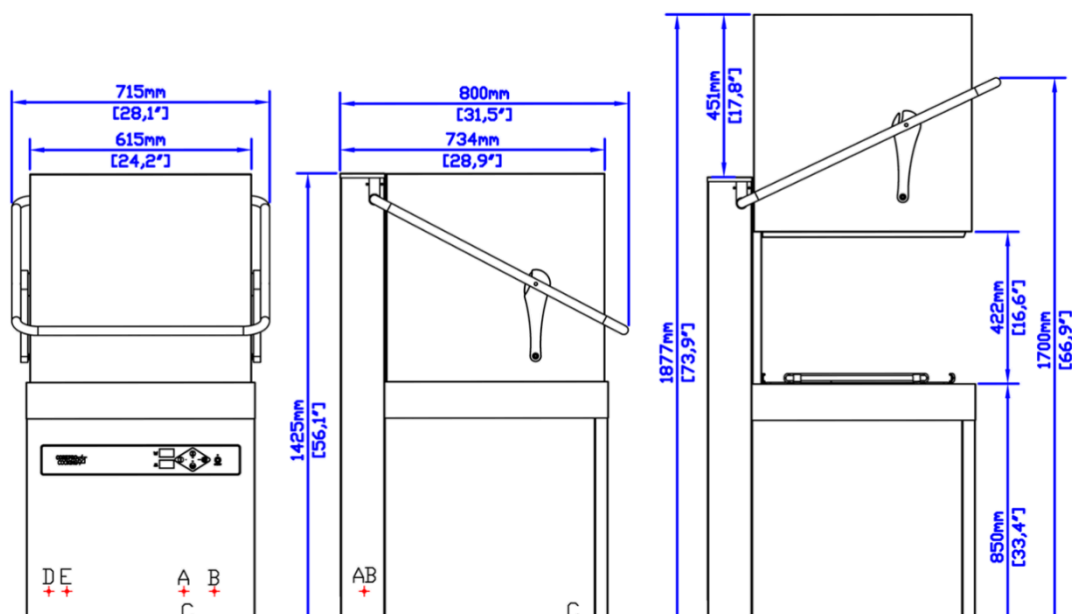


Fig 2

TECHNICAL PARAMETERS

Undercountertop dishwasher HZ-DH60	
Overall dimension	28.1" x 31.5" x 56.1"/73.9"(715 x 800 x 1425/1877mm)
Racks per hour	40
Water inlet temp	122°F-140°F (50°C-60°C)
Power supply	208-240V / 60Hz/3phase
Total Power	9.86 kW
Max wash height	16.6" (422 mm)
Wash heat power	3 kW
Wash pump power	0.71kW
Water consumption per rack	0.66 gallons (2.5 Litres)
Water tank capacity	6.9 gallons (26 Litres)
Wash temperature	140°F-149°F (60°C-65°C)
Spray temperature	181°F-194°F (83°C-90°C)
Rack size	20"x20" (500*500 mm)

3 INSTALLATION

Before installation, refer to the specifications on the nameplate facing the lower right side of the machine to determine if your power supply matches them. After opening the dishwasher box, check immediately for any damage caused by transport. If any damage is found to the machine, please retain the packing materials and notify the supplier within 15 days after receipt.

Select the appropriate location

Place dishwasher in proper operating position. Before deciding on the proper location, make sure you

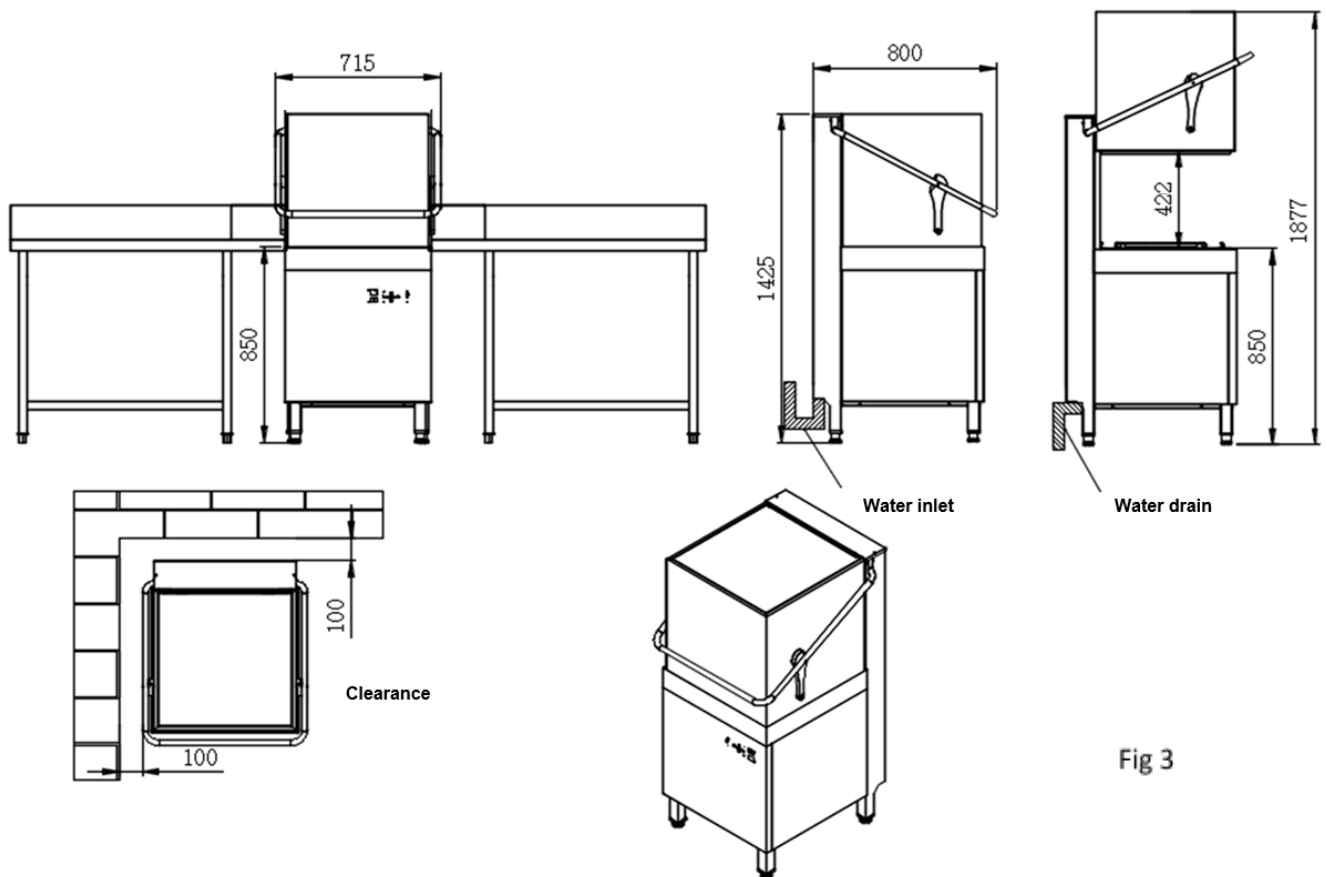
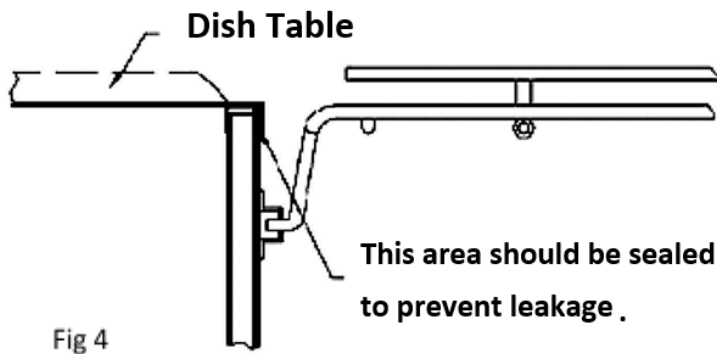


Fig 3

Connecting dishes

Note: The design height of the dish table top is 850 mm. Please specify it when ordering, otherwise it may not match.

The machine must be in a horizontal position to start connecting all water and electricity pipes, please adjust according to actual needs; stainless steel console should be lifted and buckled into the dishwasher (please refer to Figure 4), please apply appropriate sealant between stainless steel console and body lip to prevent leakage. Your local regulations may require you to install an exhaust hood or fan, and if so, the exhaust volume should not be less than 350 cubic meters per hour.



Electric Connection

Electrical connections of equipment shall be made by authorized technicians.

The power supply must be special line power supply (using five-core 6 square copper wire soft) equipped with leakage protector (using 63A four-phase leakage protection switch), in the fixed line, contact opening distance must be installed to provide all-pole disconnection device under the condition of overvoltage level III, action value $\leq 30\text{mA}$, action time $< 0.1\text{s}$.

Warning: Electrical circuits and grounding connections must comply with applicable provisions of the National Electrical Code and other local electrical codes.

Warning: Independent all-pole disconnecting device such as air switch must be installed in the power supply circuit of this machine. See the circuit data sheet for electrical parameters.

WARNING: Turn off the power and hang a visible sign at the power switch to let others know that you are repairing the circuit.

Please refer to the instructions on the power cord and the electrical schematic inside the bezel of the machine to correctly connect the different colored power cords to the power supply.



Equipotential

Equipotential means: The terminal marked by the equipotential identification is the terminal that reaches the same potential for each part of the equipment or system used after being connected to each other, which is not necessarily the ground potential, such as: local connection (equipotential connection part is below the equipment).



Protective Grounding

Grounding protection means: the terminal marked by the grounding protection mark

refers to the terminal connected with the external protective conductor to prevent electric shock in case of fault, or the terminal connected with the protective earth electrode.

Electric Data

model	connection type	Voltage (V)	Total load (A)	Total power (kw)	Pump load (A)	Pump power (kw)	Water tank power (kw)	Boiler power (kw)
HZ-DH60	208-240V, 60Hz, 3ph~	208V	25.3	7.74	3.1	0.64	2.43	6.85
		220V	26.5	8.58	3	0.66	2.72	7.67
		240V	28.4	10	2.8	0.67	3.24	9.15

Check motor rotation direction (required for three-phase machines only)

The three-phase motor must rotate in the same direction as the arrow on the pump housing. If the rotation direction is incorrect, please cut off the power supply and switch any two power cables to each other, and then turn on and off the machine to check whether the rotation direction is correct.

Warning: When testing the machine for the first time after installation, you must first check whether the rotation direction of the washing pump motor is consistent with the indicated direction. The dishwasher does not work properly when the washing pump is reversed, and even a short reversal will cause damage to the pump.

Duty Cycle Time Data

Duty cycle (seconds)	I	II	III	IIIV
Cleaning Time (sec)	74	104	164	584
pause time (seconds)	4	4	4	4

Spray Time (sec)	12	12	12	12
---------------------	----	----	----	----

Water Pipe Connecting

Warning: Plumbing connections must comply with relevant hygiene and safety standards and plumbing regulations.

Service water supply

Connect the machine inlet hose to the water source (DN 20 female). The water supply specifications are shown in the table below:

Electric heater power	water inlet temperature		inlet water pressure	
	Celsius	Fahrenheit	K Pa	kg/ cm ²
9kW	50~60	122~140	200~400	0.2~0.4
12kW	10~60	50~140	200~400	0.2~0.4

Drain Pipe Connecting

Connect the 32 mm ID drain hose under the tank to the appropriate drain. If regulations require the installation of an oil trap, the flow rate should be at least 150 litres per minute.

Note: Please test the pressure of inlet pipeline after online. If the flow pressure is less than 0.2MPa, please install booster pump (provided by customer); if the static pressure is greater than 0.4MPa, please install pressure relief valve (provided by customer).

Install automatic cleaner/drier dispenser (provided by other manufacturers)

The operate signal of that cleaning contactor is provide to the distributor

Note: Please use insulated sheathed wires with withstand voltage above 600V, do not use electric bell wires or lamp wires.

Supply pressure of the rinse aid distributor 0.05-0.10Mpa;

Supply pressure of the detergent distributor is 0.05-0.10Mpa.

Computer automatic distributor pipe connections

1. Drier interface: Open the front baffle of the machine, and the dryer interface is in the lower right corner of the rinsing tank, as shown in Figure 5;
2. Cleaning agent interface: Open the cabin door, and the white sealing port on the left side of the back is as shown in Figure 6.



Fig 5

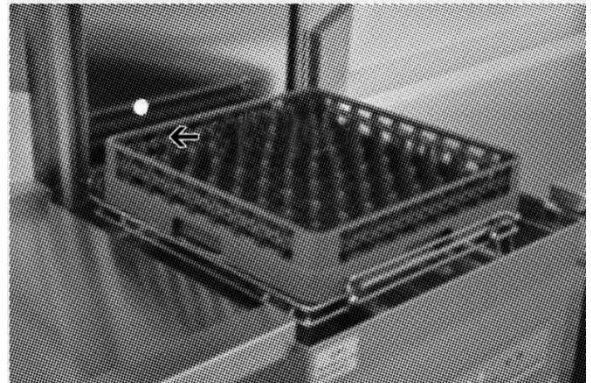


Fig 6

4 OPERATION

Fig 6



1. Open the inlet valve; And on the machine switch; Check whether the cleaning agent and drier are normal; Check whether the filter and drain pipe are installed in place.
2. Close the door Click the power switch, power indicator light, said the machine is on.The machine enters the automatic preparation mode, first automatic water, when it reaches the predetermined water level, the water tank starts to heat automatically, after reaching the set temperature, heating stops, waiting for the execution of the cleaning program.
3. Perform washing procedures:



Press the button to enter the I automatic washing cycle;



Press the button to enter the II automatic washing cycle;



Press the button to enter the III automatic washing cycle;

Press and hold the button to enter the automatic washing cycle of level III. Press and hold for 3 seconds to enter the low-temperature disinfection mode. After cleaning is complete, press any mode button to exit the low-temperature disinfection mode. If you exit this mode, closing the door will continue to operate in this mode

4. click the power switch again, the power indicator light off, said the machine off.

Power indicator	When the indicator lights up, it means the machine is turned on.
	When the indicator light is on, it means that the machine is in the process
Work instructions	of cleaning; when the indicator light is off, it means that the cleaning process has ended.
Thermometer	The upper temperature display shows the temperature of the water in the cleaning tank, and the lower temperature display shows the temperature of the water in the rinsing tank.
Automatic start	When the door is closed, the machine automatically starts the washing or filling process.
Drain pipe	When washing is finished, pull out the drain pipe in the tank and drain the water in the tank.
Recommended operating temperature	
Temperature of washing water	Set at 140 to 149 degrees Fahrenheit (60 to 65 degrees Celsius)
Spray water temperature	Set at 181 to 194 degrees Fahrenheit (83 to 90 degrees Celsius)

Preparation Procedure

1. Put the sieve plate and sieve basket in the appropriate position on the cleaning tank, insert the drain pipe (please refer to Figure VI), and close the door.
2. Press the power switch, the machine automatically fill water.
3. Water injection stop after opening the door, check whether the tank has been filled with water. Sprinkle detergent into the sieve basket and add if necessary. If an automatic detergent dispenser is installed, follow the dispenser manufacturer's instructions.
4. After closing the door, cleaning and spray cycle will automatically start. Please wait until the water tank temperature rises to a suitable temperature before starting washing.



Fig 8

Wash

1. Remove large food scraps from dishes first;
2. Soak tableware in a clean water tank for a period of time;
3. Place the soaked tableware correctly in the washing basket;
4. pre-washing with shower;
5. Select I / II / III washing cycle according to dish size and debris type.

Fig 9



Place tableware correctly
in the basket



Pre-wash treatment for
tableware

Set the plate upright on the frame. Please be careful not to stack the dishes, as water must be able to rinse both sides of the dishes. Please place the dishes in a rack and stand them on the side. Teacups, glasses and bowls are placed in open frames or shelves (Figure 7). Cutlery and other small cutlery can be loosely placed at the bottom of the basket.

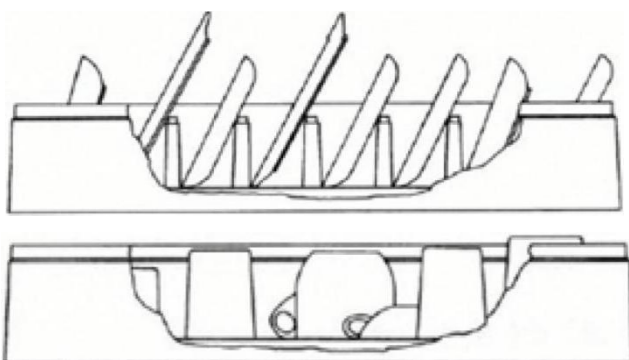


Fig 10

Dishwashing process

1. Basket rack full, open the door, basket rack into the dishwasher, and then close the door. The cleaning and spray cycle starts automatically. The cleaning cycle begins after the door is closed and the spray cycle begins after the cleaning cycle is complete.
2. At the end of the wash and spray cycle, open the door, pull out the frame and remove the clean dishes. Continue loading the next batch of dishes, push the rack into the dishwasher and close the door.
3. If you want to install dishes after the start of the cleaning cycle, please turn off the power switch, wait ten seconds before opening the door, so that the washing arm slowly stopped, to avoid hot water splashing, scalding operators.

Open the cabin door, push the basket into the dishwasher, and close the cabin.



The washing program of the machine entering gear I/ II / III / IV: main wash-pause-spray



After spraying, the whole washing process ends (washing program indicator goes out)



Open the top lid, push out the washing basket, transfer and air for 1 minute, put away the dishes

Clean the machine

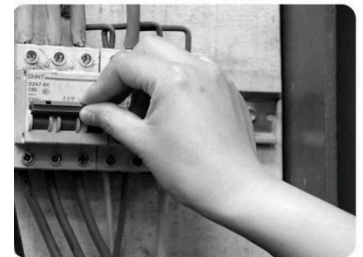
Warning: Do not flush any part except the interior of the **Suction filter**

with a jet of water such as a faucet! We recommend thoroughly cleaning the machine after each operation or at least once a day. The cleaning steps are as follows:

1. Turn off the power supply: first turn off the dishwasher power switch, and then cut off the total power supply on the wall;
2. Close the intake gate, open the engine room, take out the basket;
3. Clean the stainless steel workbench and let the water flow back to the dishwasher;
4. Remove the sieve plate, pull out the drain pipe drainage; will be inside the debris poured out after thorough cleaning. Thoroughly clean and rinse the inside of the machine;

Note: When removing the drain pipe, be careful to contact high temperature hot water to prevent burns. After drainage, when cleaning the electric heating pipe, pay attention to the high residual temperature of the electric heating pipe to prevent burns!!

5. Remove the pump filter, clean;
6. Check the electric heating pipe, scale more need to remove;



7. Install the suction filter and sieve plate of the water pump back;
8. Keep the hatch open, let the inside of the machine dry naturally, and then close the cabin.

Fig 11

5 MAINTENANCE

WARNING: Before starting any repair work, disconnect the power supply and hang a visible sign at the power switch to let others know that you are repairing the circuit.

Cleaning arm maintenance

The upper and lower cleaning arms and spray arms should be able to rotate freely. After rotating by hand, they should be able to continue rotating on their own for a few seconds before stopping. Please switch off the power supply before turning the washing arm and remove all obstacles.

If the sieve basket or pump suction screen is not installed, foreign matter (such as food debris or bones) may cause the washing arm outlet nozzle to plug. The cleaning arm can be easily removed for cleaning.

To remove the wash arm and spray arm, loosen the knurled nut between the wash arm and spray arm to remove the wash arm and spray arm.



Fig 12

Spray arm removal (refer to Figure 12)

Note: The pad sleeve on the lower cleaning arm shaft does not have to be removed.

When removing the upper washing arm and spray arm, please pay attention to hold the washing arm firmly when loosening the knurled nut, so that the washing arm does not fall off. The cleaning arm and spray arm are interchangeable up and down.

Daily maintenance items

1. Daily should check whether there is enough detergent and drier in the detergent container, the machine uses non-foaming alkaline PH > 7 detergent and non-foaming acidic PH < 7 drier).
2. Always keep equipment clean. After each job, clean the residue in the washing tub with a rag or brush, and remove the washing arm for cleaning; check whether the rinsing nozzle is blocked every week, if there is a blockage, clear it with needles, and then clean it with water.
3. Clean stainless steel surfaces regularly with a rag or brush.
4. Equipment is not equipped with demineralized water device, must be regularly descaled, descaling must be thoroughly removed with clean water after the residual descaler and scale.
5. In the machine work, check the equipment parts with the operation and washing, rinsing effect, found abnormal, must immediately stop inspection, to be troubleshooting, before continuing to work.

6. When not in use for a long time, clean the dirt inside the machine, dry it, pack it well, and store it in a ventilated and dry place.

Monthly Maintenance

Maintenance items	Maintenance content
Water pump	Check water pump tightness, seal ring, water pump rotation noise, Direction of rotation, etc.
	Check the suction of the pump
	Check whether the installation position and operation of equipment filter screen are correct
Washing system	Check water level of main washing tank
	Check the tightness of the washing line
	Check if the washing system is complete, if it sprays correctly, if the main washing arm is in the center position
Rinse system	Check water pressure and tightness
	Check that the rinsing system is complete and sprayed correctly
Racks and components	Inspect water tank, door and equipment surfaces, and inspect main wash tank screens
	Check rinse tanks, hoses, clamps, plastics and seals
	Check moving parts up and down
Water inlet device	Check water level switch, solenoid valve, clean filter screen
	Check tightness of all connections
	Check water hardness, water softener and softener for total or partial failure (if any)
Waste water treatment equipment	Check tightness
	Check water pipe pressure and operation of drain pump
Electrical equipment	Check all fuses and tighten all relevant screws
	Check main wash and rinse heater wires, thermostat and overheat protection switch
Detergent dispenser	Check concentration and adjust if necessary

6 TROUBLESHOOTING GUIDE

This section allows you to try to solve the problem yourself, but if the problem persists after you check for possible causes, contact your local maintenance department and authorized unit immediately.

Issue	Possible cause
The machine doesn't work	1. Open the door for 2 seconds and then close it. 2. power fuse burned out or circuit breaker jump. 3. Check whether the control circuit fuse FU3 is damaged.
Long-term cleaning	1. The temperature of the heating box does not reach the set temperature. 2. Check whether the preheating time is too short; whether the thermostat and heater are damaged.
Dishes not washed	1. cleaning pump suction plug caused by insufficient water pressure, cut off the power supply and the water tank drain, check whether there is foreign matter pump suction. 2. the water temperature is too low, preheating time is too short; check the thermostat and heater. 3.the amount of detergent is not correct, please contact your detergent manufacturer representative. 4.cleaning arm and spray arm scale deposition too much, may need to carry out in addition to scale procedures.
Spots on cutlery, glasses, dishes	1. The way the tableware is installed in the basket is incorrect. 2. Spray water temperature is not enough. 3. The water pump suction port is blocked and the water pressure is not enough. 4. Hard water composition is too high. 5. The detergent is not suitable for the water used. 6. Quick-drying agent is not suitable for the water used. 7. Cleaning agent, quick-drying agent concentration is not correct.
Without rinsing	1. The water leakage net is too dirty, so that the flow slows down, turn off the water source, open the inlet hose connector and solenoid valve inlet connector, remove the filter clean, and then re-install. 2. Water supply pipeline water pressure is too low.
Valve leakage	1. Foreign matter obstructs the normal operation of the valve. Note: Inspection after installing the machine is critical, as pipe compound or debris may fall into the valve during installation. Shut off the water supply, loosen the screws, remove the cap from the valve, clean the valve thoroughly, and reassemble it.

No water injection or slow water injection	1. the water leakage net is too dirty, so that the flow slows down, turn off the water source, open the inlet hose connector and solenoid valve inlet connector, remove the filter clean, and then re-install. 2. The water pressure in the water supply pipeline is too low.
--	---



AC/3PH~208~240V/60Hz/9.86kW