User Manual

NOBLE WAREWASHING

HIGH-TEMPERATURE

Underbar Glass Washer

495HTGW22 208/240V ▪ 1 PHASE

Warning:

Read and understand all INSTRUCTIONS before operating.
Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

10/2025

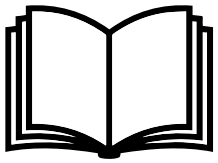
READ FIRST

THIS MANUAL MUST BE RETAINED FOR FUTURE REFERENCE. READ, UNDERSTAND, AND FOLLOW THE INSTRUCTIONS AND WARNINGS CONTAINED IN THIS MANUAL.

WARNING

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE, OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY, OR DEATH.

READ THE INSTALLATION, OPERATION, AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

				
WARNING	HAZARDOUS VOLTAGE	PLEASE READ INSTRUCTIONS	PROTECTIVE GROUNDING	EQUIPOTENTIAL BONDING

Model:	Purchased From:
495HTGW22	
Serial:	**Location:**
Date Purchased:	**Date Installed:**
Purchase Order:	**For Service, Call:**

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Intertek 9900857

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NEMA 6-20P

Conforms to UL STD. 921
Certified to CSA STD. C22.2 NO. 168
Conforms to NSF/ANSI STD. 3-2019

General Information and Warnings

- This manual has been created to help you understand the operation, installation, and maintenance of the machine. It contains all the necessary information and warnings to ensure that the appliance is installed and used correctly, together with information about the characteristics and possibilities offered, so that you may enjoy your machine to the fullest.


BEFORE STARTING THE APPLIANCE, PLEASE READ THE INSTRUCTIONS CONTAINED IN THIS MANUAL CAREFULLY.


The manual should be kept safely on hand for future reference.


If the machine is sold or transferred, please give the manual to the new user.


THIS APPLIANCE IS EXCLUSIVELY FOR PROFESSIONAL USE AND SHOULD ONLY BE USED BY QUALIFIED PERSONNEL.

- The positioning and installation, and all repairs or modifications, should always be carried out by an AUTHORIZED TECHNICIAN, in accordance with the applicable local legislation. The manufacturer does not accept liability if the machine is incorrectly installed.
- Incorrect installation, adjustment, maintenance, or use of the appliance may cause material damages and injuries.
- The dishwasher should be installed on a level surface.
- Ensure that none of the electric cables or water/drainage hoses are trapped or kinked.
- **DO NOT** climb on top of the dishwasher or place heavy objects on top of the machine, as it has only been designed to bear the weight of the basket of plates to be washed.
- **The dishwasher is designed for washing plates, glasses, and other kitchenware with traces of human food. Any other objects must not be washed in the machine.**

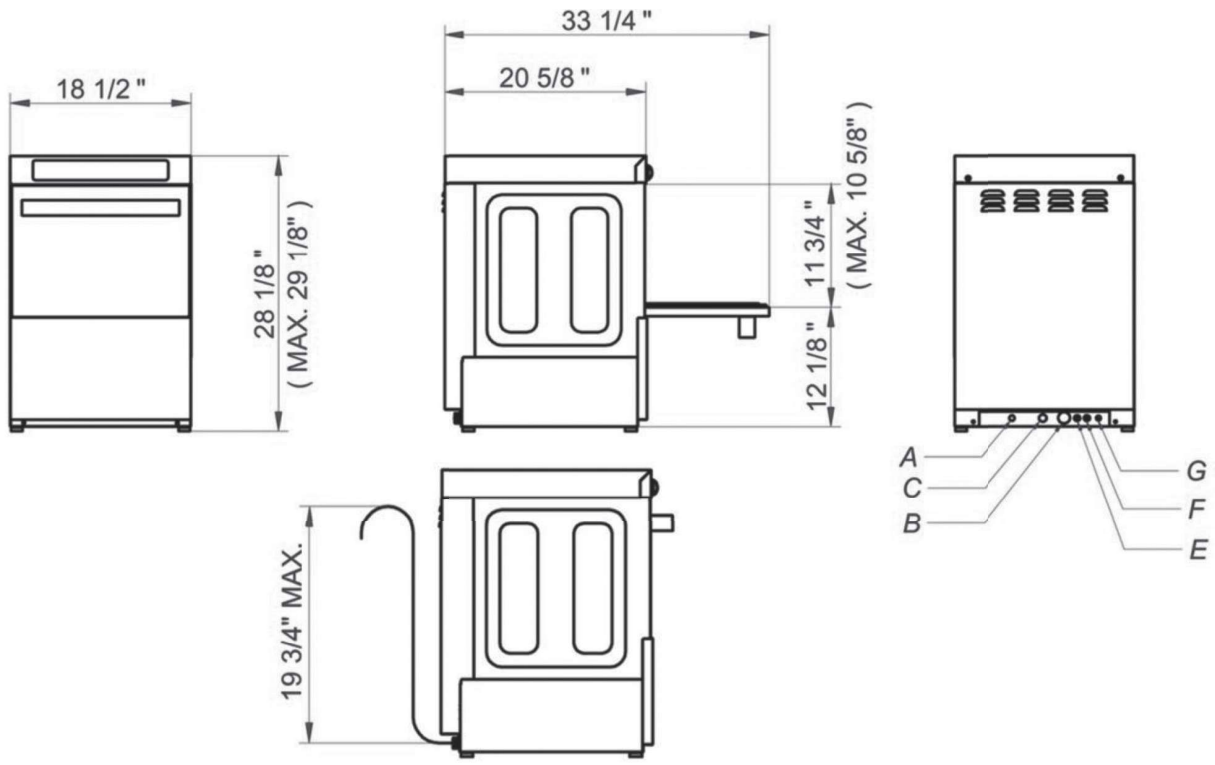

If your machine breaks down, please **contact an authorized dealer**.


Unqualified or unauthorized personnel must **NOT** try to repair the machine.


Use of spare parts other than original parts will void the warranty.


During all maintenance operations, the dishwasher must be disconnected from the main power supply and the water intake tap must be closed.

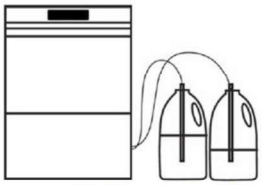
General Measurements and Connections



A	B	C	D	E	F	G
Water Inlet	Drain Hose	Power Supply Cable Strain Relief	Connection Strip (Inside)	Rinse Aid Inlet	Detergent Inlet	Equipotential Bond

Quick Startup Guide

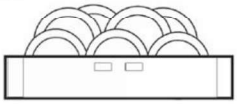
WASH

1. 
Check chemical levels

2. 
Turn on: Hold the on/off button for 3 seconds

3. 

Wait for wash temperature to read between 158-162 °F / 70-72 °C

4. 
Pre-scrap wares thoroughly
Place in rack

5. 
Load rack into dishwasher

6. 

Close door, press P1, P2 or P3 for 1 second to start wash cycle

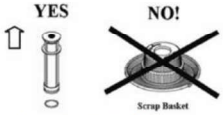
7. **WASH CYCLE IS EXTENDED IF THE FINAL RINSE WATER IS NOT UP TO 180 °F / 82 °C**

Cycle is complete when cycle light stops blinking

DRAIN

1. 
Open the door

2. **Drain Pump**



Remove overflow tube

3. 

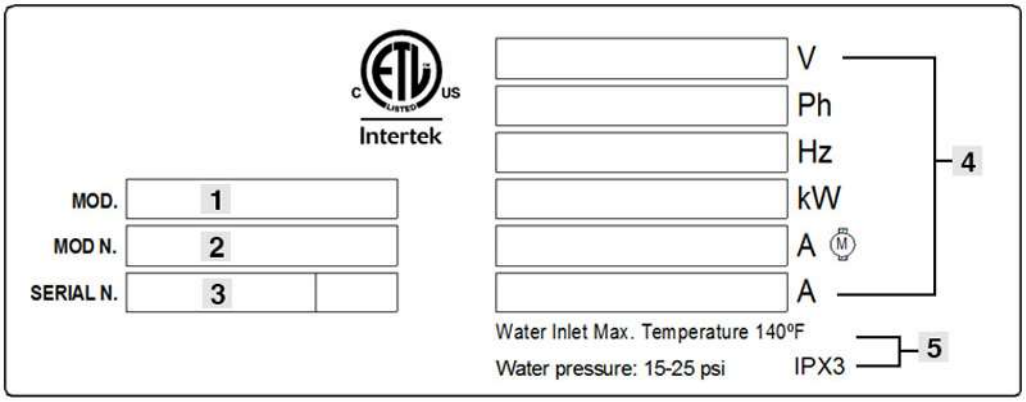
With door open, hold on/off button for 3 seconds to start drain cycle

4. **KEEP DOOR OPEN UNTIL WATER HAS DRAINED. CLEAN INSIDE THE UNIT AND REPLACE COMPONENTS**

Product Details

Technical specifications listed below. The data plate identifies the appliance and indicates its technical characteristics. Under no circumstances should the data plate be removed from the unit. The data plate is essential to identify the particular features of your machine and is of great benefit to installers, operators, and maintenance personnel. It is recommended that, in the event the data plate is removed, you record the essential information in this manual for reference before installation.

DATA PLATE



1. APPLIANCE MODEL NAME
2. APPLIANCE REFERENCE
3. SERIAL NUMBER + MANUFACTURE DATE
4. ELECTRICAL SPECIFICATIONS
5. WATER INLET SPECIFICATIONS

These details should be quoted when the technical service is called.

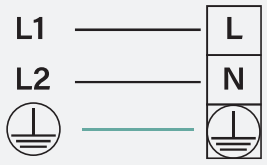
MODEL	RACKS PER HOUR	WASH TANK (Gal)	GALLONS PER CYCLE	WATER INLET MAX TEMP.	WATER INLET PRESSURE
Glasswasher 495HTGW22	22	4	0.53	140°F	At Pressure Gauge 20psi ± 5psi

MODEL	WASH PUMP MOTOR	HEATING ELEMENTS		OPERATING CYCLE TIME (s)			
		WASH TANK (kW)	BOILER (kW)	WASH	DWELL	RINSE	TOTAL
Glasswasher 495HTGW22	1/3 hp	2.15	3	101	5	14	120

MODEL	WIDTH	DEPTH	HEIGHT	MAX CLEARANCE FOR DISHWARE	RACK
Glasswasher 495HTGW22	20 7/8"	26 3/4"	35	10 5/8"	16" x 16"

MODEL	CONNECTION TYPE	VOLTAGE (V)	TOTAL LOAD (A)	TOTAL POWER (kW)	PUMP LOAD (A)	PUMP POWER (kW)	TANK POWER (kW)	BOILER POWER (kW)
Glasswasher 495HTGW22	208-240V 60Hz 1Ph	208V	12.03	2.50	1.02	0.21	1.64	2.29
		220V	12.73	2.80	1.08	0.24	1.83	2.56
		240V	13.88	3.33	1.18	0.28	2.18	3.05

Glasswasher - 495HTGW22



208-240V, 60HZ, 1PH

Installation Instructions

⚠ **The dishwasher shall be installed in accordance with local codes, and in the absence of local codes, installed in accordance with the applicable requirements in the National Electrical Code, NFPA 70, Canadian Electrical Code (CEC), Part 1, CSA C22.1, and Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, NFPA 96.**

⚠ **The positioning and installation, and all repairs or modifications, should always be carried out by an AUTHORIZED TECHNICIAN, in accordance with the applicable legislation of the country.**

⚠ **Incorrect installation, adjustment, maintenance, or use of the appliance may cause material damages and injuries.**

REMOVAL OF PACKAGING

- Remove packaging from the machine and check for damage during transportation. If any damage is observed, immediately notify the supplier and the transport company. In the event of doubt, do not use the machine until the unit has been assessed.

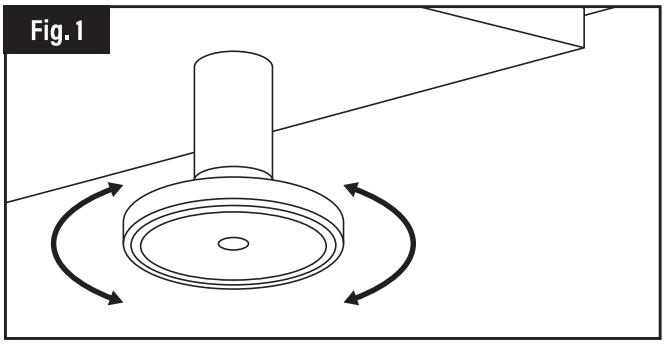
⚠ **Packaging (plastic, expanded polyurethane, staples, etc.) is a potential hazard and must not be left near children.**

- The machine should be moved using a fork-lift truck or similar to avoid damage to the structure. Transport the machine to the installation location and then remove packaging. All the packaging can be recycled. Dispose of packaging correctly.

POSITIONING AND LEVELING

- This appliance has adjustable feet. This is done by turning the leveling stands to the desired height (Fig. 1). For optimum operation, it is essential that the machine is correctly leveled. The flooring on which the machine is to be installed must be able to bear the full weight of the machine.
- **Inspect final location of the machine prior to installation to prevent damage during use.**

Fig. 1



ELECTRICAL CONNECTION

⚠ **An AUTHORIZED TECHNICIAN should always carry out the appliance's electrical connection.**

⚠ **The dishwasher shall be installed in accordance with local codes, and in the absence of local codes, installed in accordance with the applicable requirements in the National Electrical Code, NFPA 70, Canadian Electrical Code (CEC), Part 1, CSA C22.1, and Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, NFPA 96.**

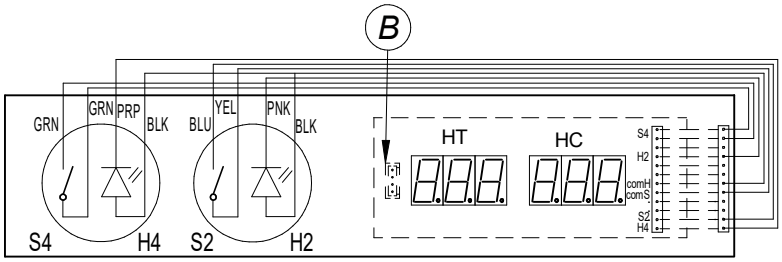
⚠ **THIS APPLIANCE, WHEN INSTALLED, MUST BE ELECTRICALLY GROUNDED. The manufacturer cannot accept any responsibility for damage caused from a failure to observe grounding instructions.**

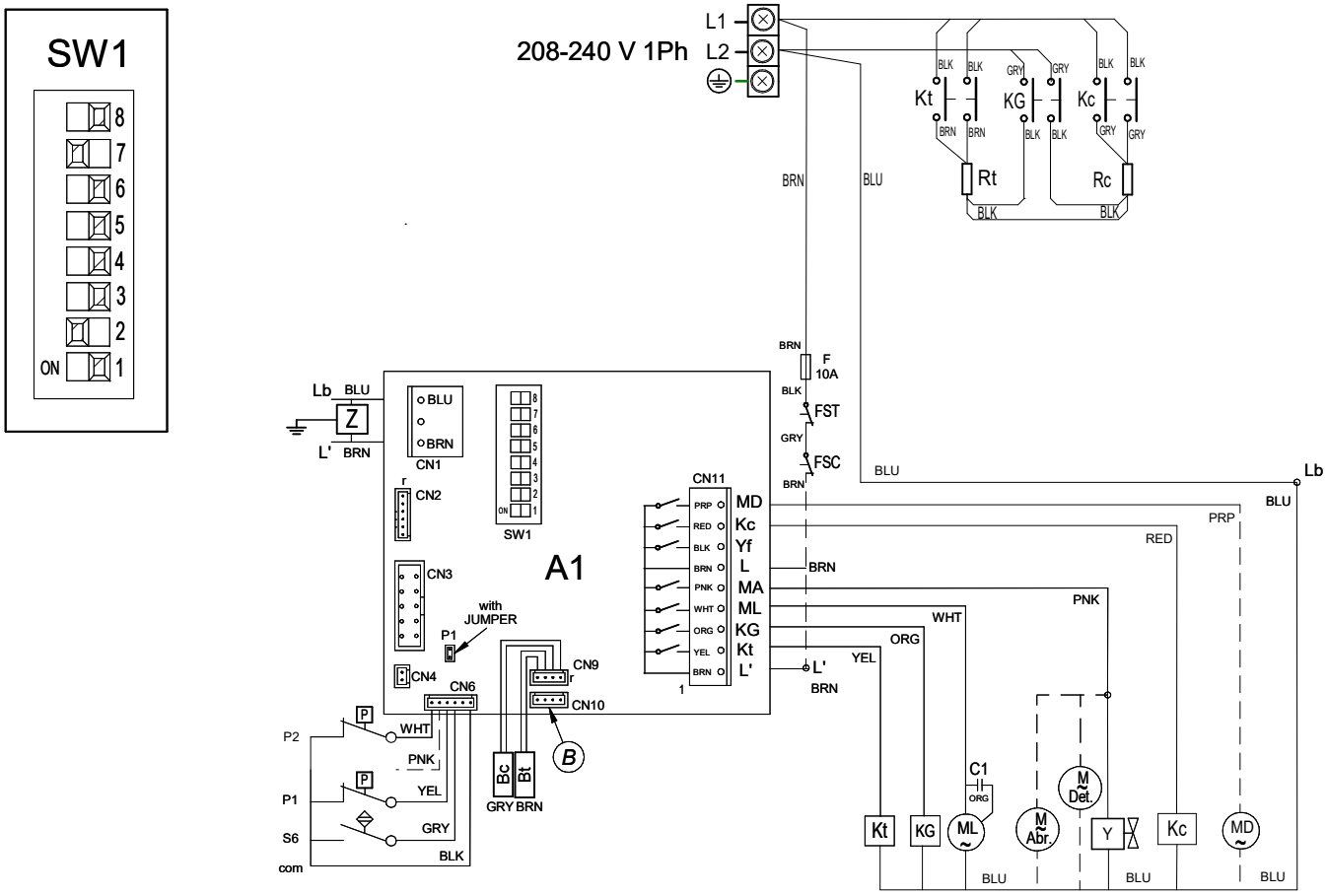
- Refer to the wiring diagram, the machine data plate, and technical specifications for service size requirements.
- Check that the mains voltage corresponds to that indicated on the data plate.
- The power supply cord shall be Type S, SE, SO, SOO, ST, STO, or STOO (with or without W at the end).
- The power supply cord wire size must be suitable for the rated current of the machine (amperage load). Use copper conductors only.
- The appliance must be grounded using the ground connection of the terminal block of the appliance.
- An all-phase circuit breaker must be installed near the appliance between the power supply and the appliance in accordance to required consumption guidelines. Switch the circuit breaker to "OFF" when servicing the appliance. It is recommended that it has lockout-tagout capabilities. The manufacturer will not be held liable for damage originated by failure to observe this requirement.
- A suitable safety switch / residual current device must be installed near the appliance between the power supply and the appliance. The manufacturer will not be held liable for damage originated by failure to observe this requirement.
- If any faults are observed during the installation, the supplier should be notified immediately.
- When a number of appliances are installed in line, they should all be ground bonded at the point provided for that purpose.
- To access the connection strip when a permanent connection needs to be made, release the cover of the machine's front (see Section 3 - General Measurements and Connections). The power cable is connected to the connection strip. It is also possible to change the machine configuration here.

⚠ **The manufacturer will not be held liable for any personal or material damage to the machine resulting from incorrect installation or failure to comply with the manufacturer's specifications.**

⚠ **It is the personal responsibility and obligation of the customer to contact a qualified electrician to assure that the electrical installation is adequate.**

ELECTRICAL DIAGRAM





ELECTRICAL DIAGRAM

Symbol	Description
	Terminal Block Bridge
A1, A2	Electronic Board
A1-P1	Electric Bridge / Jumper
Bc	Boiler Temperature Probe
Bt	Tank Temperature Probe
C1, C2	Capacitor
F	Fuse
FSC	Boiler Safety Thermostat
FST	Tank Safety Thermostat
H1, H2, H3	Cycle Light
H4	Power Light On
HC	Boiler Temperature Display
HT	Tank Temperature Display
KC	Boiler Heating Contactor
KG	Main Relay
KT	Tank Heating Contactor
L, L1, L2, L3	Power Supply Phases
MAbr	Rinse Aid Dispenser
MA	Rinse Pump
MD	Drain Pump
MDet	Detergent Dispenser
MHRS	HRS / Ventless Fan
ML, ML1, ML2	Wash Pump
N	Neutral
P1	Tank Pressure Switch
P2	Tank Safety Pressure Switch
P3	Boiler Pressure Switch
PE / ⏚	Earth Ground
RC	Boiler Heating Element
RT	Tank Heating Element
S1, S2, S3	Program / Cycle Push Button
S4	On / Off Push Botton
S6	Door Switch
SW1	Dip-Switch
TRF	Transformer
Y	Tank Filling Solenoid Valve
Yf	Boiler Filling Solenoid Valve
Z	EMC Filter

Symbol	Color
BLK, bk, n	Black
BLU, bl, a	Blue
BRN, bn, m	Brown
GRN, gn, ve	Green
GRY, gy, g	Grey
ORG, or, na	Orange
PNK, pk, rs	Pink
PRP, pr, vi	Purple
RED, rd, r	Red
WHT, wh, b	White
YEL, yw, am	Yellow
YW / GN, am / ve	Yellow / Green

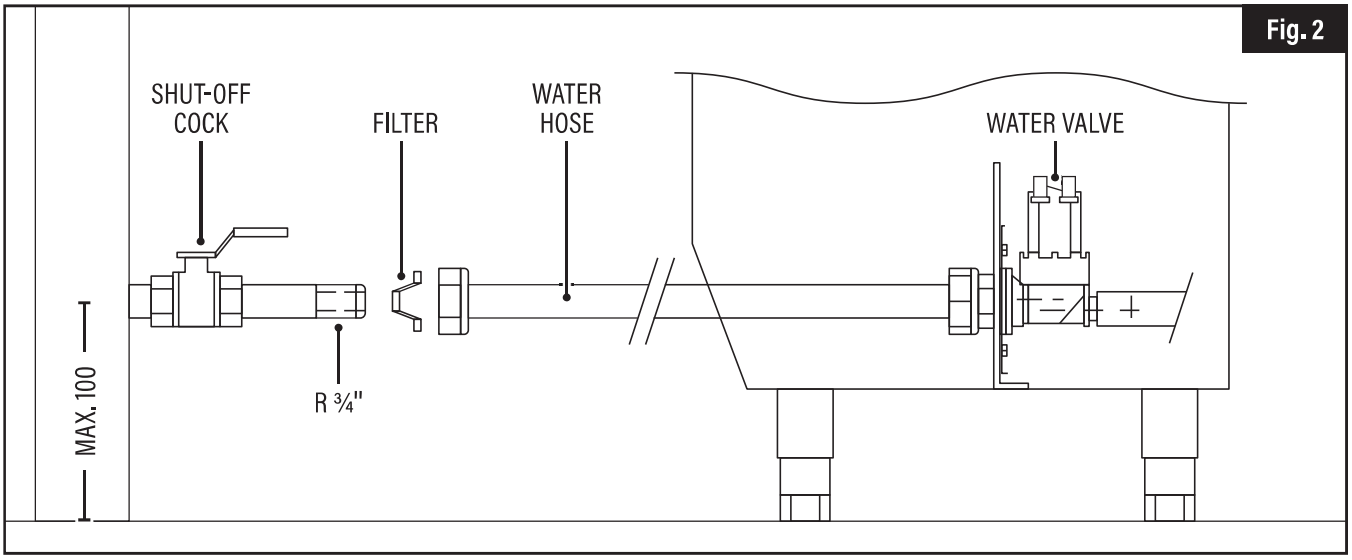
WATER CONNECTION

- The new hoses supplied with the appliance should be used (do not reuse old hoses).
- Before connecting the machine to the water supply, the water quality should be tested. Recommended water quality:

pH	6.5 - 7.5	Alkalinity	Less than 50 ppm (mg/L)
Free Chlorine	Less than 0.2 ppm (mg/L)	Total Dissolved Solids (TDS)	Less than 60 ppm
Chlorides	Less than 30 ppm (mg/L)	Sulfates	Less than 40 ppm
Hardness	Less than 3 gpg (52 ppm)	Iron	Less than 0.1 ppm
Conductivity	400 - 1,000 µS/cm	Copper	Less than 0.05 ppm
Silica	Less than 12 ppm (mg/L)	Manganese	Less than 0.05 ppm

- Water installation is carried out as shown below (Fig. 2):

Fig. 2



- Use ¾" copper tubing inlet line.
- It is necessary to remove all foreign debris from the water line that may potentially get trapped in the valves or cause an obstruction prior to connecting to the machine.
- Use only the supplied hoses (¾" female hose connector) at the water connections. Failure to do so may result in damage to the solenoid valve threads and leakage. Tighten by hand. Connect the bent side of the hose to the machine. Adaptor supplied for ¾" female garden hose connection.
- **FOR HARD WATER SUPPLIES WITH A HARDNESS OF OVER 3 gpg OR 5°fH AND PH BEYOND THE RANGE OF 6.5 – 7.5, A WATER CONDITIONER/DESCALER MUST BE INSTALLED.**
- In addition to water quality, the pressure of the mains water supply must be considered. This is important to ensure the machine operates correctly.

Glasswasher (495HTGW22):

- Required water dynamic pressure measured at pressure gauge 20psi ± 5psi.

⚠ **CAUTION: Static pressure is not equivalent to flow pressure. Static pressure is the line pressure in a "no flow" condition (all valves and services are closed). Flow pressure is the pressure in the fill line when the solenoid valve is opened during the filling or cycle.**

- In areas where the pressure fluctuates or it is higher than the recommended pressure, a water pressure regulator shall be installed between the shut-off cock and the water hose (Fig. 1).
- If the water pressure is less than required, installation of a water pump is required.
- The hot water heater should be set to deliver 140°F (not lower than 122°F) water temperature to the dishwasher for best results.
- Slowly turn on the water supply to the machine after the incoming fill line and the drain line have been installed. Check for any leaks and repair as required. All leaks must be repaired prior to placing the machine in operation.
- The following requirements are necessary for the correct hydraulic installation of the machine:
  - The hydraulic circuit must be fitted with a valve to shut off the water supply.
  - Check that the mains pressure is within the range indicated.
  - To optimize the work of the machine, the water temperature at the machine intake should be within the following range: 122°F (50°C) < hot water temp < 140°F (60°C).
  - If using hot water, the water temperature must not exceed 60°C / 140°F.
  - All the machines should have a ¾" screw-on connection.

DRAINAGE CONNECTION

- Attach the drain hose as shown in Fig. 3. The drainage pipe must always be fitted on a siphon to prevent the return of odors.
- All piping from the machine to the drain must be a minimum 1 ½" I.P.S. There should also be an air gap between the machine drain line and the drain. For natural overflow efficiency, use floor drain.
- The water draining from the machine must flow freely and therefore the drainage pipe should be lower than the drainage outlet (Fig. 3).
- If the drainage pipe is not lower, with the incorporated drainage pump, the drainage outlet can be mounted at a maximum height of 19 ¾" (Fig. 4).

Fig. 3

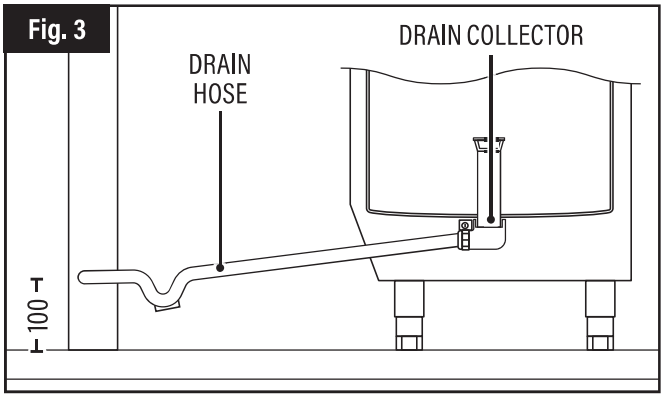


Fig.4

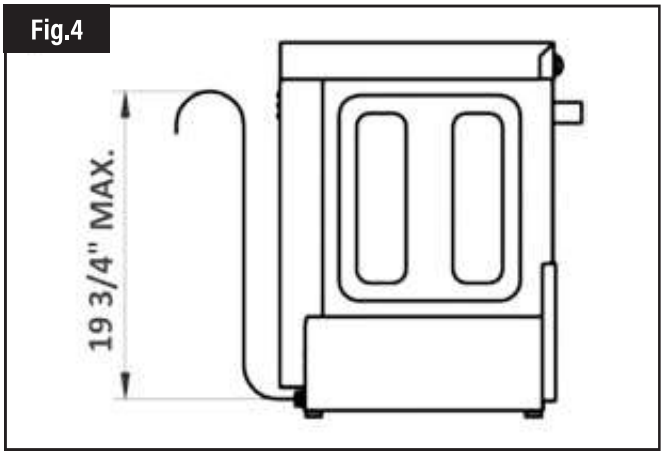
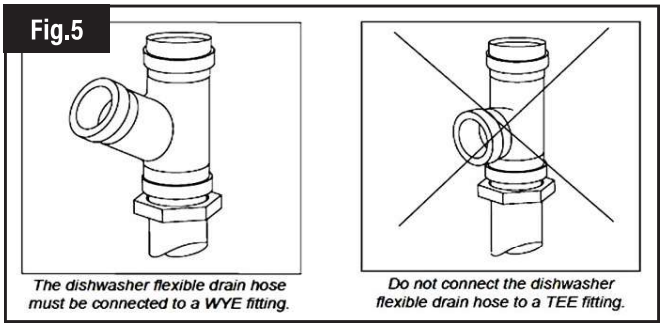


Fig.5

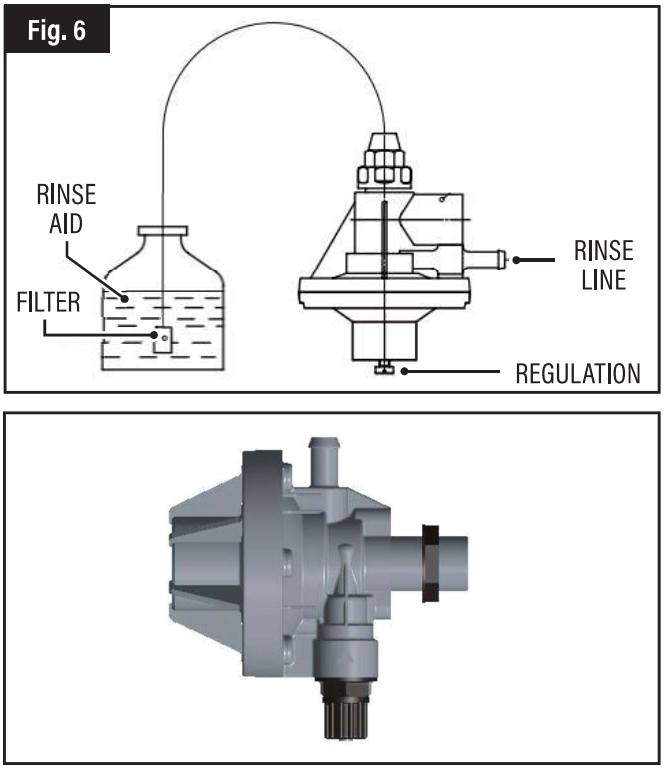


LIQUID RINSE AID DISPENSER

- **Installation:** Take the tube located in the back or your machine marked "Rinse Aid" and place inside rinse container (Fig. 6).
- Tubes are transparent to make it visible that the chemicals are being dispensed.
- **Operation:** This dispenser absorbs the rinse aid when it detects a loss in pressure during rinsing. That is, when the filling solenoid valve closes, a vacuum is created that makes the rinse aid dispenser absorb the fluid to which it is connected.
- **Adjustment:** The dispenser should be adjusted when the machine is installed to ensure that the wash is optimized from the start. The setting should be adjusted according to the type of rinse aid and the water hardness.

⚠ **WATER PRESSURE MUST BE MINIMUM 20 PSI AT THE PRESSURE GAUGE FOR THE RINSE AID DISPENSER TO OPERATE PROPERLY.**

Fig. 6



DETERGENT DISPENSER

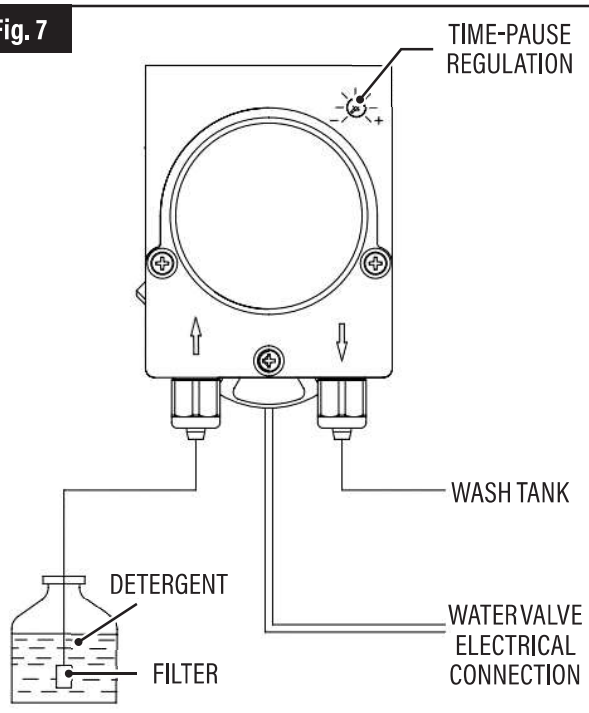
- This machine must be operated with an automatic detergent feeder including a visual means to verify that detergent is delivered or a visual or audible alarm to signal if detergent is not available for delivery to the respective washing system. Please see instructions for electrical and plumbing connections located in this manual and in the feeder equipment manual.
- The detergent dispenser ensures that the correct measure of detergent is supplied to the machine.
- **Use ONLY commercial-grade, high-temperature, low suds liquid detergent.** Noble doesn't recommend any specific brand name of chemicals. Contact your local chemical distributor for questions concerning your chemical needs.
- **Installation (Fig. 7):** The detergent dispenser input is in the wash tank front part, above the maximum water level.
- Take the tube located in the back or your machine marked "Detergent" and place inside detergent container. Tubes are transparent to provide you visible means that chemicals are being dispensed.
- **Operation:** The detergent dispenser is activated when the machine is taking water, whether it is in rinse cycle or whether it is filling.
- **Settings:** The quantity of detergent used should be adjusted on installation to ensure that the wash is optimized from the start.

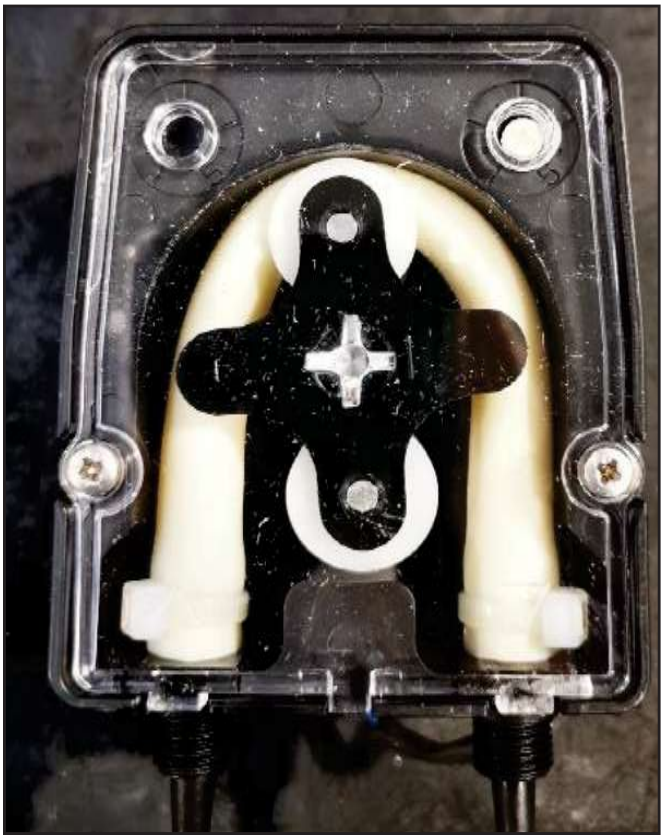
⚠ **It is recommended that the detergent and the dispenser setting are defined by a technician specialized in the use of chemical products in order to ensure a more efficient wash.**

⚠ **If you require the installation of a NON-NOBLE detergent and/or rinse pump, a form MUST be filled out prior to installation by your installer. Failure to do so will void your Warranty. This form can be located inside your dishwasher. If lost, please contact Noble to get a copy.**

- **The detergent pump and rinse dispensing pump will only work during the process of fill and rinse.**

Fig. 7





RECYCLING

The product packaging consists of:

- A wooden pallet.
- Cardboard.
- A polypropylene band.
- Expanded polyethylene.

- All the packaging used around the machine can be recycled. The correct disposal of these products will help to protect the environment. For further information regarding the recycling of these products, please refer to your local recycling authority.

USE AND MAINTENANCE INSTRUCTIONS

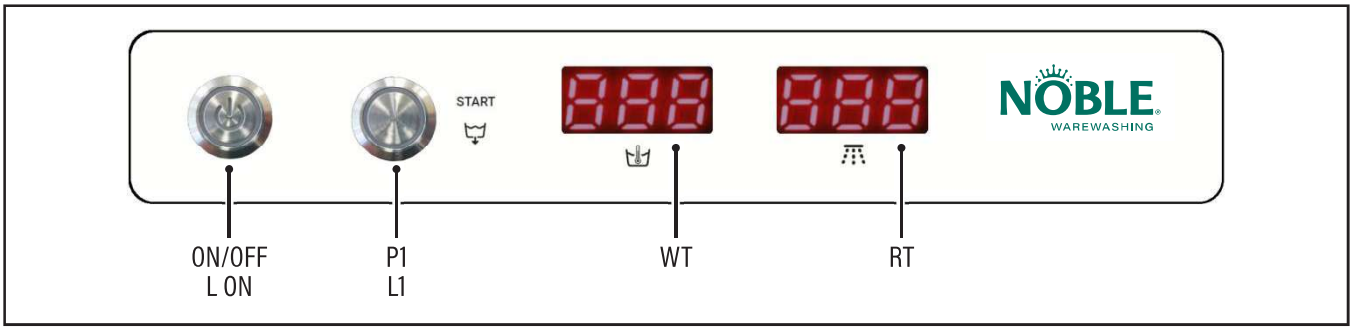
BEFORE STARTING THE APPLIANCE, PLEASE READ THE INSTRUCTIONS CONTAINED IN THIS MANUAL CAREFULLY.

THE APPLIANCE IS EXCLUSIVELY FOR PROFESSIONAL USE AND SHOULD ONLY BE USED BY QUALIFIED PERSONNEL

OPERATION

- The steps required to optimize the operation of your dishwasher are shown below, with all the available options.

CONTROL PANEL SYMBOLS



ON/OFF	L ON	P1	L1	WT	RT
ON/OFF Button	ON/OFF Pilot Light	Wash Cycle 1 / Drainage Button	Blinking: Cycle Pilot Light Steady: Wash Tub Over 150°F	Wash Tub Thermometer	Rinse Boiler Thermometer

SWITCHING ON THE MACHINE

Before switching on the machine, check the following:

1. The mains switch must be on.
2. The water stop cock must be open.
3. There must be water in the mains network.
4. The corresponding filters must be in place.
5. The overflow should be mounted in place.

To switch on the machine, press the ON-OFF button once for 2 seconds.

FILLING AND HEATING

- In the glasswasher model, when the machine is switched on, it will start to fill the machine. First, the rinse boiler is filled, then the wash tub. The filling process may last a few minutes. Once the wash tub is full, the boiler and the tub start to heat up. Although it is possible to start the wash process at this time, this is not recommended as the water inside the machine is not yet at the ideal temperature. When the machine has reached the ideal temperature for washing the dishes properly, a light comes on, advising the user that the machine is ready.
- The required temperature of the machine is over 180°F in the rinse boiler (see thermo-stop chapter) and over 158°F in the wash tub. It is recommended that the water in the dishwasher is changed every 40-50 washes or twice a day.
- **The door must be closed for the machine to start filling. For safety reasons, if the door is open, the machine will not fill.**
- This machine you have purchased has a safety thermostat in the boiler and another for the tub, so that in the event of the breakdown of any of the main thermostats, the safety thermostats switch off the corresponding heating.
- **During the first heating of the day, the boiler may reach a higher temperature than that mentioned above due to heating inertia. This is normal. If pressurized steam is observed coming out of the rinse arm nozzles while the boiler is heating, the technical service should be notified.**

HYGIENE PRACTICES

- Operators must strictly observe all hygiene requirements when handling clean dishes and cutlery.
- Do not touch clean dishes with dirty or greasy hands. Handle the dishes/cutlery with gloves or clean hands to prevent contamination. Be careful, as the dishes will be hot.
- Use clean, sterilized cloths to thoroughly dry the dishes. Do not dry the plates with kitchen towels or cloths that are not sterile.
- Wait until the machine reaches the correct wash temperature to ensure a thorough disinfection and wash. To obtain optimum results, wash the dishes when the machine is ready.
- Drain the wash tub and rinse the filters at least twice a day or every 40–50 wash cycles.
- Make sure that the quantities of detergent and rinse aid dispensed are correct (as recommended by supplier). At the start of the work day, check that the quantity of product in the reservoirs is enough for the daily requirement.

PREPARATION OF THE DISHES

Before washing the dishes, the preparatory steps below should be followed:

- Remove the largest pieces of waste from the dishes before placing them in the baskets to avoid blocking the filters, nozzles, and tubes.
- Wash glassware first.
- Put the plates in the dish rack (Fig 8).
- Place the glasses upside down (Fig. 9).
- Place the cutlery in the cutlery baskets with the handles downwards (Fig. 10). The different pieces of cutlery can be mixed.
- Place the cutlery baskets in the lower baskets.


Fig. 8


Fig. 9


Fig. 10

SELECTING THE WASH CYCLE

- Before starting the wash cycle, place the corresponding basket containing the dishes in the machine and close the hood/door.
- Before starting the wash cycle, the machine should have the ideal temperature for washing the dishes properly indicated by the temperature on thermometers, advising the user that the machine is ready. The required temperature of the machine is over 180°F (see thermo-stop section below) in the rinse boiler and over 158°F in the wash tub.
- To start the wash cycle on the glasswasher, a wash cycle button must be pressed (P1) with the door closed.
- When the wash cycle starts, the selected program LED will flash on blinking.
- **The door must be closed for the machine to start the wash cycle. For safety reasons, if the door is open, the wash cycle will not start.**

⚠ **If you start your dishwasher prior to your boiler reaching a minimum of 180°F (83°C), YOU WILL HAVE AN EXTENDED WASH CYCLE!**

WASH CYCLE TIMES

- **Model:** Glasswasher #495HTGW22
- **P1:** 120 seconds

THERMO-STOP

- The thermo-stop is designed to ensure a constant rinse at the maximum temperature. This means that the machine continues washing until the boiler reaches the ideal temperature, then the rinse cycle starts.
- **If the mains water temperature is less than 50°C / 122°F, the wash capacity may be reduced.**

STOPPING THE WASH CYCLE AND END OF WASH CYCLE

- The wash cycle can be stopped or paused in the following ways:
  - By pressing the active cycle button → the cycle stops completely.
  - By opening the door → the cycle pauses. When the door is closed, the cycle continues.
  - By switching off the machine → the cycle stops completely.
- At the end of the wash cycle, remove the basket and leave the dishes to dry naturally. Remove the dishes from the basket with clean hands.

⚠ **CAUTION: Dishes are extremely hot. Use caution when removing dishes from the basket.**

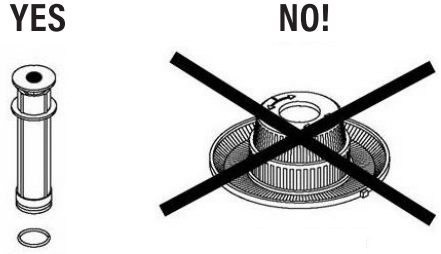
DRAINAGE OF THE MACHINE

The machine is equipped with a built-in drain pump.

1. Remove the overflow tube. (Fig. 11)
2. With the door open, press the button P1 for 3 seconds. L1 will blink during operation.
3. Wait until the LED L1 turns off. At the end of the drain cycle, the machine will be automatically switched off.
4. Clean any dirt that could be on the bottom of the tub.
5. Take out scrap basket for cleaning by twisting to the left. (Fig. 12)
6. Replace scrap basket, lock into position by twisting to the right, and replace overflow tube with O-ring.
7. Wipe clean and dry the machine if the day is completed. Leave door open until the next day's operations or until the machine will be used again.

- To avoid the risk of damage from oxidization or corrosion from chemicals, keep all steel surfaces clean.
- **To drain the machine with the drainage pump, the hose must be at a height of 19 ¾" in glasswasher.**

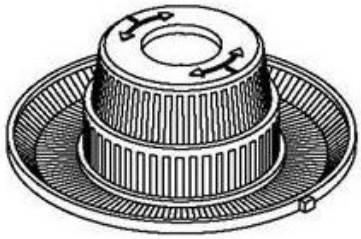
Fig. 11



OVERFLOW TUBE WITH O-RING

SCRAP BASKET

Fig. 12



SCRAP BASKET

SWITCHING OFF THE MACHINE

- To switch off the machine, press the ON/OFF button once for 2 seconds.
- The machine should not be switched off during the wash process, as this will stop the tableware inside the machine from being cleaned properly.

Cleaning and Maintenance Instructions

ROUTINE MAINTENANCE

- Every day at the end of the day, the filters, wash arms, rinse arms, and other accessories must be cleaned.
- To ensure the efficient washing of the dishes, the dishwasher must be perfectly clean and disinfected.
- Always clean the machine correctly to prolong the service life of the machine.
- Remove any waste from the machine at the end of each day.
- Do not use abrasive, corrosive, or acid products, chlorine-based detergents or solvents, or petrol derivatives to clean the machine.
- Do not use pressurized water to clean the machine.
- Do not spray the machine with a water hose, steam cleaner, or pressure washer.
- In order to prevent water from entering into the machine uncontrollably, make sure that the machine's base is not flooded when cleaning the floor.
- Only wash tableware, glassware, or kitchenware that has been used for human food.
- Check that the wash arms rotate correctly every day.
- Check the rinse aid and detergent levels at the start of each day.
- If the power cable is damaged, it must be replaced by the manufacturer, after-sales service, or authorized technical personnel in order to prevent risks.

RINSE AID AND DETERGENT

- If you change the rinse aid or detergent, the settings should be adjusted accordingly. This adjustment must be carried out by qualified personnel. Only use detergents suitable for industrial dishwashers. Do not use foam-producing detergents. Detergents designed for domestic use should not be used under any circumstances.

⚠ **When handling chemical substances, the safety instructions must be observed. Use suitable protective clothing, gloves, and safety goggles when handling chemical substances. Do not mix different detergents.**

PROLONGED NONUSE

If the machine is kept out of service for a long period of time (holidays, temporary closure, etc.), please observe the following:

1. Drain the machine completely, including the boiler.
2. Clean the machine thoroughly.
3. Leave the door of the machine open.
4. Close the water intake valve.
5. Switch off the mains power supply.
6. If there is a risk of frosts, ask your technical service to protect the machine against frosts.

Troubleshooting

- The steps to be followed in the event of a fault or operating error are described below. The possible causes and solutions are listed in the following table. In the event of doubt, or if you are unable to resolve the problem, please contact the technical service.

DO NOT HANDLE ELECTRICAL COMPONENTS, AS THERE IS A RISK OF DEATH AS THE COMPONENTS ARE LIVE.

FAULT	POSSIBLE CAUSE	SOLUTION
The machine does not start.	There is no power supply.	Check whether the magneto-thermal circuit breaker has been triggered.
	A fuse has blown.	Call technical service for analysis.
	Main switch open.	Close switch.
The machine does not fill with water.	Water entrance valve closed.	Open the water valve.
	Rinse nozzles blocked.	Clean nozzles and check arms for build-up of lime.
	Solenoid valve filter blocked.	Call technical service to clean the filter.
	Rinse pump faulty.	Call technical service to replace the pressure switch.
	Pressure switch is broken.	Call technical service to replace the pressure switch.
Unsatisfactory wash.	Wash arms obstructed.	Clean arms thoroughly.
	Shortage of detergent.	Call technical service to reset the dispenser.
	Dirty filters.	Clean the filters thoroughly.
	Presence of foam.	Unsuitable detergent. Call technical service to supply correct detergent.
		Too much rinse aid. Call technical service to reset the dispenser.
	Temperature of lower tub at 50°C/122°F.	Thermostat faulty or incorrectly set. Call technical service to repair it.
	Length of cycle too short for level of dirt on dishes.	Select a longer cycle.
	Water too dirty.	Drain the wash tub and fill with clean water.
Dishes and kitchenware are not dry.	There is no rinse aid.	Fill the rinse aid container.
	Rinse aid low.	Call technical service to adjust dispenser.
	Dishes left inside dishwasher for too long.	When the dishwasher finishes, remove the basket from the machine and allow to dry naturally.
	Rinse temperature lower than 80°C/176°F.	Call technical service to analyze problem.
Scratches or stains on dishes.	Too much rinse aid.	Call technical service to adjust rinse aid dispenser.
	Water too chalky.	Check water hardness.
Machine stops during operation.	Electrical installation overloaded.	Call technical service to modify electrical installation.
	Machine protection has tripped.	Reset safety device and if it trips again, call technical service.
Machine stops and fills with water when it is washing.	Pressure switch pipe blocked.	Empty the tub and clean thoroughly.
	Pressure switch faulty.	Call technical service to replace it.
	Overflow incorrectly mounted.	Mount overflow correctly.
The machine does not start with the wash cycle.	Hood/door is not closed properly.	Close the hood/door correctly and if it opens on its own, call technical services to adjust the tensioners.
	Hood/door micro switch faulty.	Call technical service to replace it.
Machine does not drain completely.	Machine not leveled correctly.	Level the machine. In the event of doubt, please contact your technical service.
	Pressure switch faulty.	Call technical service to replace the pressure switch.

- **NOTE: If a fault occurs and is not listed in the above table, please call the technical service. The manufacturer reserves the right to modify the technical characteristics with prior warning.**

ERROR DISPLAYED	DESCRIPTION	SOLUTION
E1/bP	Boiler probe failure	Call service technician.
E2/tP	Tank probe failure	Call service technician.
E3/bo	Boiler overheating	Check if water supply is turned 'ON'.
		Call service technician.
E4/to	Tank overheating	Check if water supply is turned 'ON'.
		Call service technician.
E5/bh	Boiler heat element failure	Call service technician.
E6/th	Tank heat element failure	Call service technician.
E7/dr	Draining failure	Check tank drain is not blocked.
		Check the drain hose is not blocked.
		Call service technician.
E8/bF	Boiler not filling	Check if water supply is turned 'ON'.
		Check if overflow tube is installed.
		Check if drain hose has fallen below tank drain.
E9/tF	Tank not filling	Check if water supply is turned 'ON'.
		Check if overflow tube is installed.
		Call service technician.
E10/rS	Rinse error	Call service technician.
do/or	Door is open	Close door.