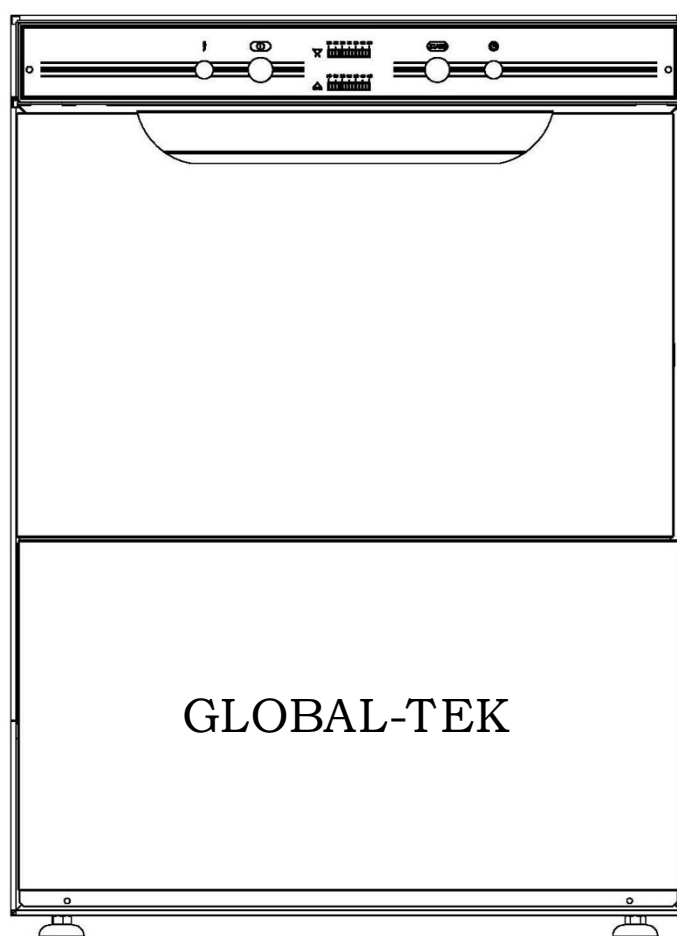


UNDER COUNTER GLASS & DISHWASHER

Model: GT-U1M (C)

Rack size: 500 mm x 500 mm

INSTRUCTION & INSTALLATION MANUAL



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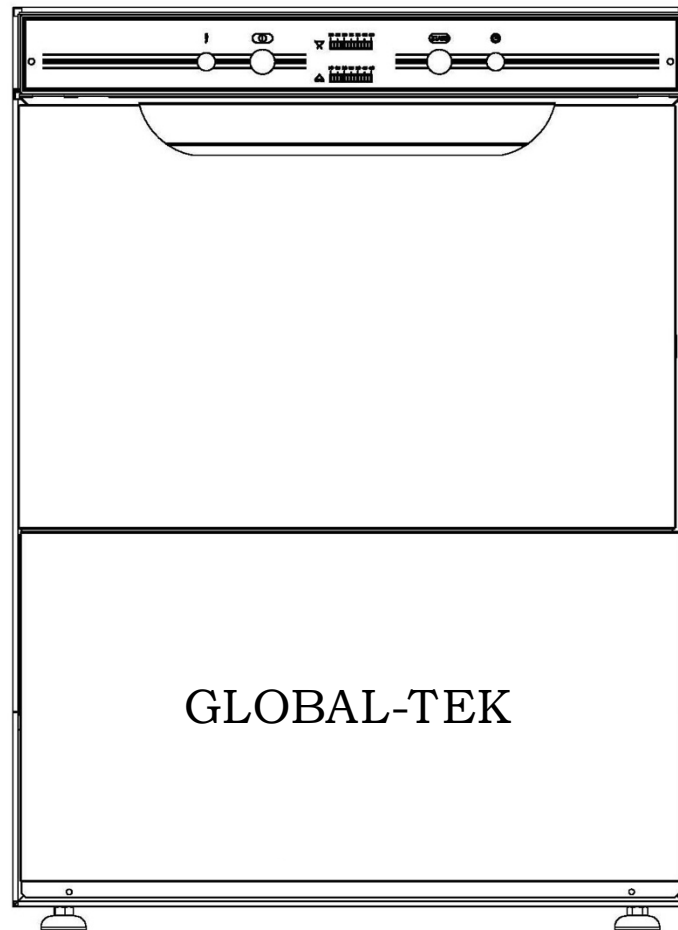
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Installation, Operation & Maintenance

OVERVIEW

GT-U1M (C) Under Counter glasswasher is a rack loading semi-automatic dishwashing machine. When the wash tank is filled up to the required water level, with the door closed and “Start” button depressed, the machine will run the wash and rinse cycle.

The machine comes with a 3 kW wash tank heater and a built-in booster heater with 4.5 kW heating element.



INSTALLATION

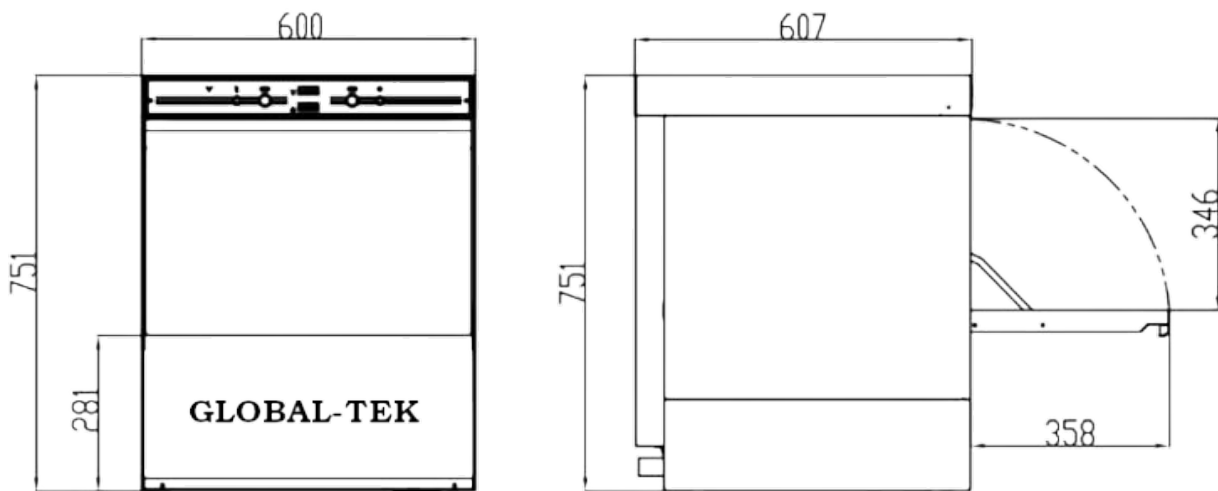
Before installation, please see the specification tag placed on the right side of the machine, make sure to verify the electrical power supply. After the packing is opened, please examine the machine immediately for any damage caused during transportation. If any, please keep all the packing materials, and inform the supplier within 3 days.

Select the right place for installation

It is important to put the dishwasher at the right place for installation. Before deciding a proper location, do consider the connection of power supply, water supply, drainage, gas heater (if required), stainless steel working tables and chemical dispensers (to be provided by chemical supplier), ensuring that there is adequate space for daily maintenance and ceiling height for opening of machine door. (See diagram 1)

Diagram 1

The machine must be horizontally placed for all electrical and water connections. To reach the desired height level and maintain balance, turn the adjustable foot accordingly.



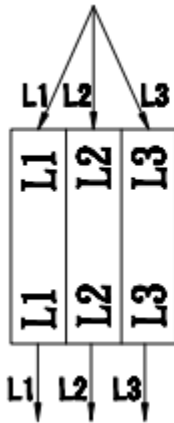
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Converting from 3 Phase 380V (12 Amp) to 1 Phase 220V (24Amp)

In main power supply

1. Remove wires L2 & L3 from in-coming power cable side.
2. Join **terminals** L1, L2 & L3 together.
3. Remove L2 from outgoing wires side, isolated it with a wire cap (not provided).
4. Remove L3 from outgoing wires side then connect it to the empty N terminal provided.
5. Refer to the Diagrams below for reference.

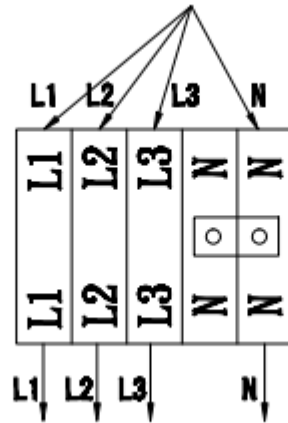
Incoming power cables



Outgoing power cables
3 Phase 220V

Diagram 2C

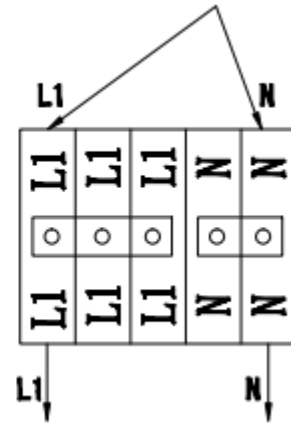
Incoming power cables



Outgoing power cables
3 Phase 380V

Diagram 2A

Incoming power cables



Outgoing power cables
1 Phase 220V

Diagram 2B

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In booster heating element

1. Remove wire V1 from heating element (diagram 3B).
2. Connect the three points together, as shown in Diagram 3A.
3. Connect U1 & W1 to each side of the terminals.

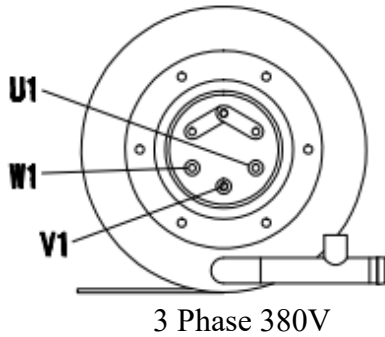


Diagram 3B

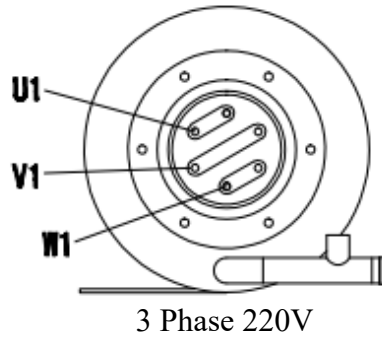


Diagram 3C

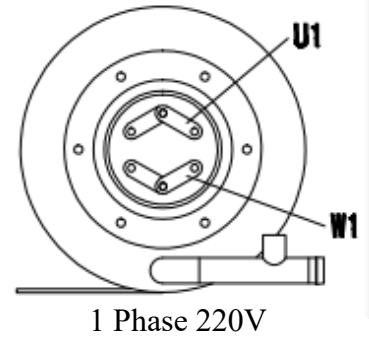


Diagram 3A

In booster heater contactor

Remove wires L2 & V2 from booster heater contactor

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Power connection

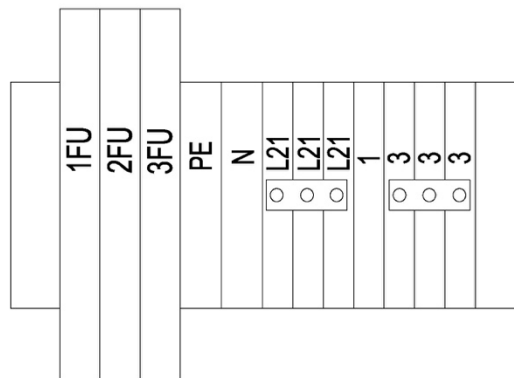
- ⚡ **Warning:** All connection for electricity and grounding must comply with any applicable ordinance of the national or local electrical regulations.
- ⚡ **Warning:** Turn off power supply, place caution signs nearby to alert anyone **NOT** to power on. Please read the electrical wiring diagram carefully as shown on the machine case or panel, and properly connect the power cables with its designated terminals.

Signal terminals for connecting detergent dispenser

In the electrical control panel, **1FU** provides 230v, 5A constant supply for dispensing equipment. Connect **2FU & N** terminals with the detergent signal power of the dispenser, connect **3FU & N** terminals with the rinse signal power of the dispenser (see diagram 2), each power loading must not exceed 3A. During wash cycle, 2FU provides 230V output; during rinse cycle, 3FU provides 230V output. Please refer to the electrical wiring diagram on the machine case.

- Attention: The pull-out distance of the electrical box should be put into consideration for all the wire connections, to prevent wires from loosening.
- Attention: Please use 600V or above sealed electrical wire, do not use telephone wires.

DIAGRAM 4



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Water connection

- ◆ **Caution:** Check water inlet pressure after connection, if flowing pressure below 1 kg/cm², a water pressure pump (to be provided by other suppliers) is needed, if static pressure is higher than 3 kg/cm², a water pressure reducer (to be provided by other suppliers) is needed.
- ⚡ **Warning:** Water pipe connection must comply with relative local hygiene safety regulations and plumbing code.

Water supply

Connect the water inlet hose (3/4" thread) with water supply valve.

Relative Heating Power	Water Inlet Temperature	Water Flow Pressure
2 kW Rinse Heating	30 °C to 50 °C (86 °F to 122 °F)	1 to 3 Bar (1 to 3 kg/cm ²)

Rinse water consumption per rack

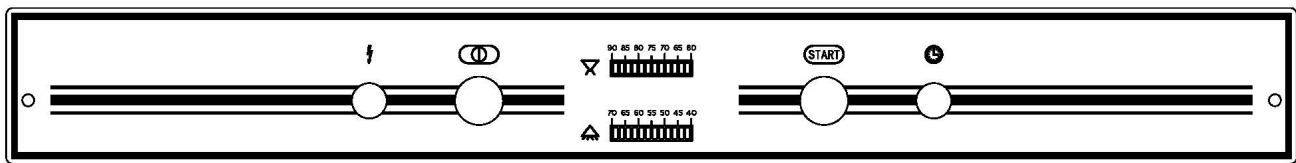
Each rinse cycle consumes not more than 2.4 liter of fresh water per rack washed.

Drainage

Connect the drain-pipe (1½") under the wash tank to an appropriate drainage (drain capacity should be at least 95.5 l/min).

OPERATION

Control panel



(Buttons from left to right)

Power I / 0 Press the “Power” Button (Power Light On) to switch the machine on. Press the “Power” Button again (Power Light Off) to switch the machine off.

Power Light When the Power Light is On it means that power is connected to the machine.

Cycle Mode There is only 1 cycle mode initiated by the “Start” button.

Cycle Time The machine Cycle Time is programmed for a typical soiled wash ware (standard cleaning cycle). A full cycle lasts for 90 seconds, which comprises of a 76 second wash cycle, a 2 second pause, and a 12 second rinse cycle.

Cycle Light When the Cycle Light is On, the dishwashing process is in progress. When the Cycle Light is Off, the dishwashing process is completed.

Temp. Light Upper temperature indication shows the wash temperature. Lower temperature indication shows the rinse temperature. When lights in the green zone are present, the representing tank has achieved its optimum operating temperature.

Recommended operating temperature

It is highly recommended to follow the local temperature regulations.

Main wash temp.	50 °C to 65 °C (122 °F to 150 °F)
Final rinse temp.	82 °C to 90 °C (180 °F to 195 °F)

Start Close the door, press the “Start” Button, the machine will automatically commence the wash and rinse cycle.

Drain To drain the tank water, lift the overflow pipe. Once water is fully drained from the tank, plug the overflow pipe back to its original position. To clean the wash chamber, ensure the overflow pipe is plugged in and keep the machine running for 3 to 5 minutes.

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Preparation works

- ◆ Ensure that the scrap trays are properly placed into the machine, with the overflow pipe properly plugged in.
- ◆ Close the door and press the “Power” button. The machine will automatically commence the filling of the wash tank.
- ◆ Wait until wash/rinse temperature reaches to its green range before initiating the dishwashing cycle.
- ◆ Close the door, press the “Start” button for the 1st wash only, subsequent wash will start automatically once door closed.

Washing procedures

- ◆ Scrape off food residues from tableware.
- ◆ Properly load tableware into racks, with the manner that all the surfaces of every piece of tableware should have adequate exposure for the wash cycle. Dishes are to be vertically placed, and bowls should be put faced down into plate rack; cutlery, chopsticks have to be dispersedly loaded in open rack; and glasses must be put faced down into compartment rack. Wash cycle time is pre-set at 76 second, it can be adjusted up to max. 120 second by changing the setting of the wash cycle timer which located inside the electrical control panel.
- ◆ When a rack is loaded, open the door, slide it into the machine, close the door and press the “Start” button, the wash and rinse cycle will commence automatically. Main wash program starts when the door is closed, and final rinse program will follow right after wash cycle is finished.
- ◆ When wash & rinse cycle has ended, the Cycle Light will go Off. Open the door, slide out the washed rack, then load in another rack, close the door, and commence for the next wash.
- ◆ Whenever a new cycle starts, ensure that the door is fully closed and sit in. Otherwise, there will be a risk of hot water splashing. After each cycle, wait until Cycle Light goes Off, and open the door slowly.

Cleaning the machine wash chamber

- ◆ It is recommended to clean all interior parts of the machine wash chamber thoroughly every 4 hours of heavy usage or at least once a day.

Cleaning procedures:

1. Turn off power.
2. Open the door.
3. Lift overflow pipe to drain tank water.
4. Remove scrap trays and pump intake screen, dump the residues, and clean the equipment.
5. Rinse the interior of the machine with clean water thoroughly to wash away all the dirt within the wash chamber.
6. Put all the straining equipment back to place.
7. Check every upper and lower spray nozzle for any signs of clog. If there are, use a narrow pin to clear off obstruction or remove the spray arms to clean.
8. Keep the door open to air dry the wash chamber. This is to prevent bacteria growth from damp conditions.

MAINTENANCE

⚡ **Warning** Turn off power supply, place caution sign nearby to alert anyone **NOT** to power on.

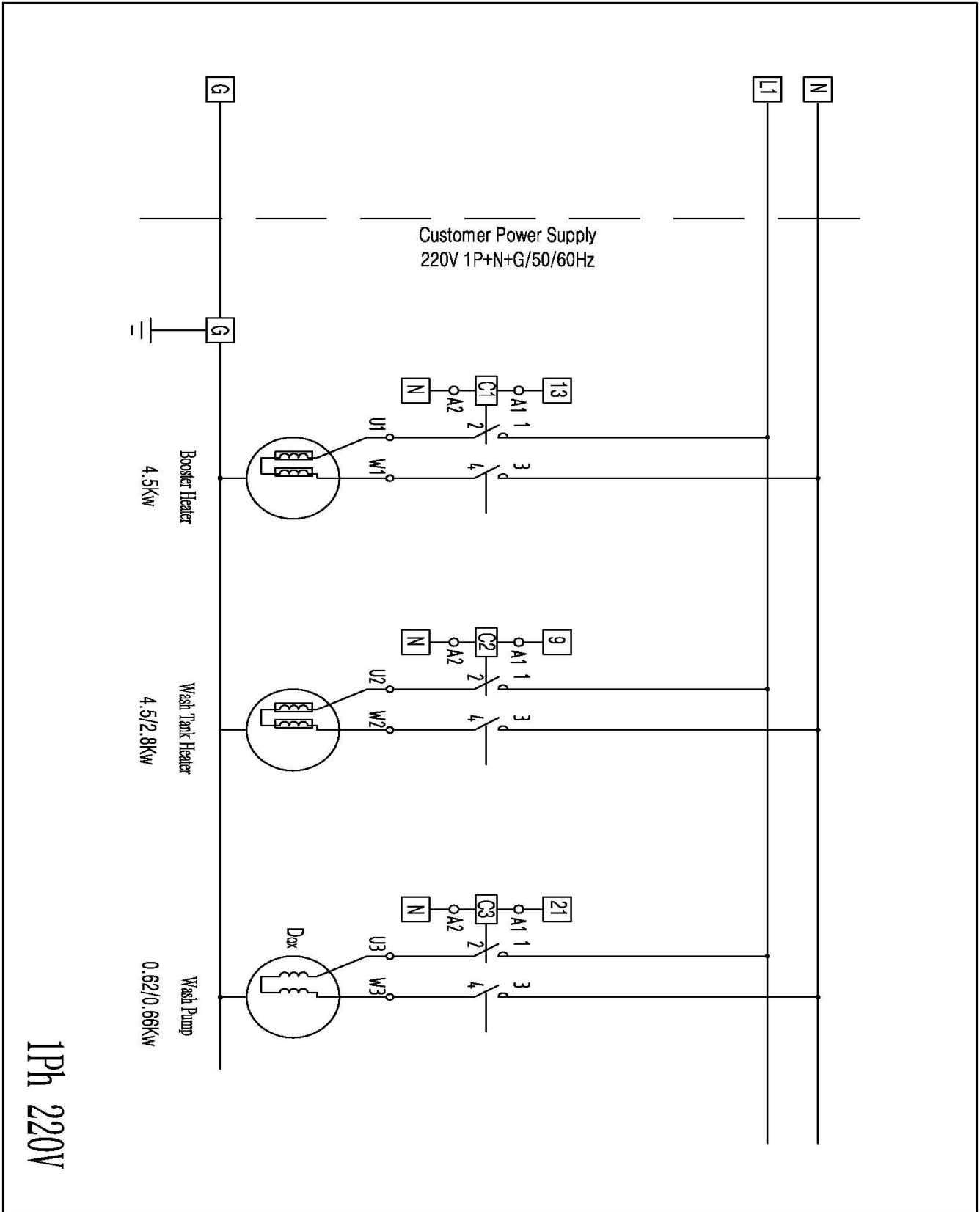
Wash and rinse arms

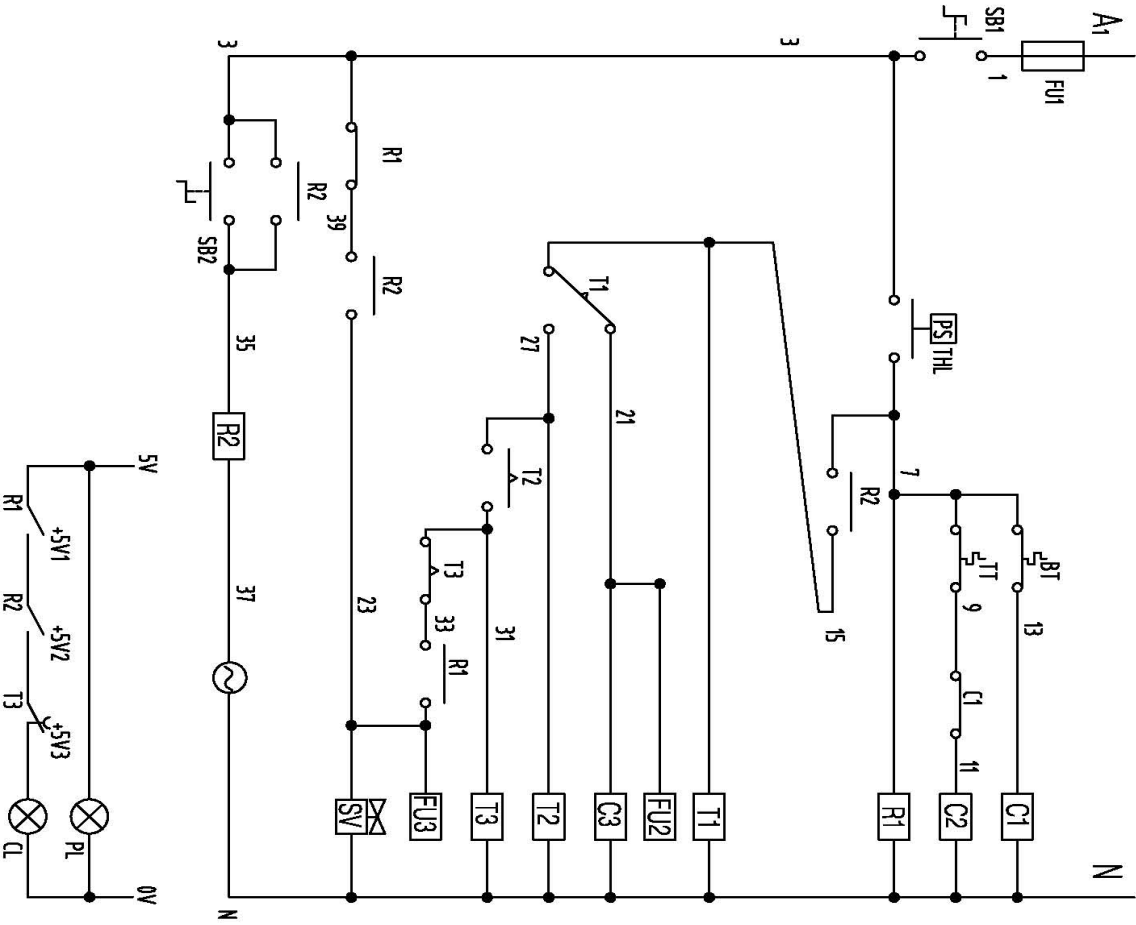
1. Ensure both upper and lower wash/rinse arms can rotate freely with gentle swinging. Turn off the machine before testing and remove obstruction present if any.
2. If the straining equipment is not in use, the wash/rinse arm nozzles may be clogged. Refer to “Cleaning Procedures” to remove the clog.
3. To remove the wash and rinse arms, remove the lock screws between the bearings of both arms.
4. Ensure that the O-ring seat of the lower wash arm is not removed.
5. When removing the upper wash/rinse arm, hold the arm during removal of the lock screw to prevent it from falling.
6. Both sets of upper and lower wash/rinse arms are interchangeable.

TROUBLE SHOOTING

This chapter only provides general methods for troubleshooting. If problem persists, please contact the supplier for assistance.

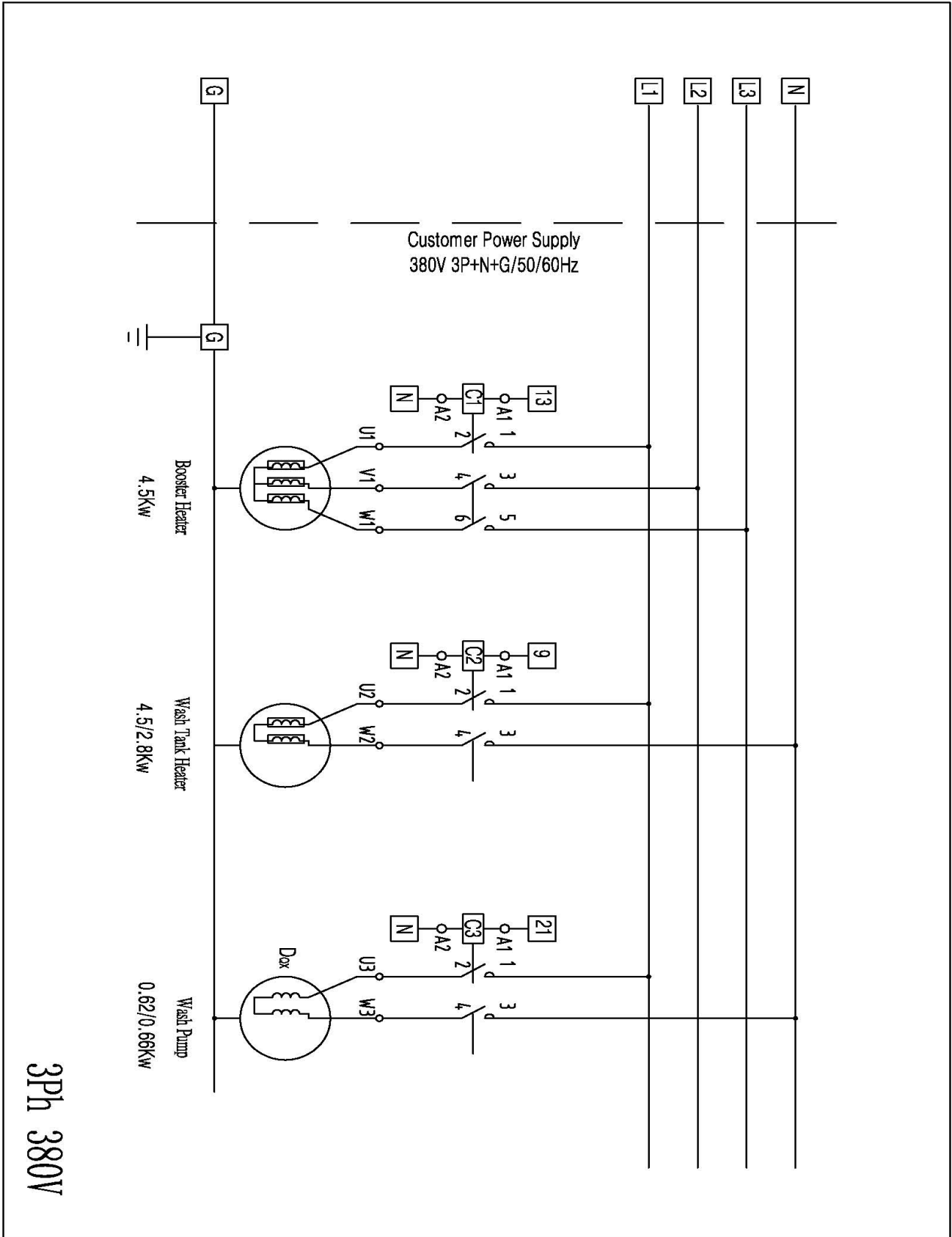
Symptoms	Possible reasons and rectification procedures.
Machine unable to start.	<ol style="list-style-type: none">1. Open the door and shut down again after 2 seconds.2. Fuse blown or jumper disconnected.3. Check the fuse of the control circuit for continuity.
Wash cycle is longer than stated duration.	<ol style="list-style-type: none">1. Wash Timer may be faulty.2. Check wash timer for serviceability.
Rinse remains at below optimum temperature.	<ol style="list-style-type: none">1. Rinse temperature set too low.2. Water fill pressure or flow rate is too low, causing low water level in booster heater.3. Check water inlet strainer and solenoid valve.
Poor wash results	<ol style="list-style-type: none">1. Incorrect pump direction.2. Wash spray is too weak due to clogged pump intake. Power off and drain tank water, check wash pump intake for any signs of obstruction.3. Wash temperature is too low due to inadequate heating time.4. Check the thermostat and heating elements for serviceability.5. Improper detergent dosage, please contact chemical supplier.6. Excessive lime build-up, need to perform descaling before operating machine
Streaks found on wash wares.	<ol style="list-style-type: none">1. Improper racking.2. Rinse temperature is too high or too low.3. Clogged pump intake.4. Abnormal water quality from inlet.5. Wash detergent does not suit with local water quality.6. Rinse drying agent does not suit with local water quality.7. Improper dosage of the cleaning chemicals.
Inadequate rinse pressure	<ol style="list-style-type: none">1. Water inlet strainer may be clogged, causing low water flow rate. Close the water supply, remove the strainer between inlet hose and solenoid valve, clean the strainer screen and then reinstall items.2. Water supply pressure is too low.3. Rinse nozzles may be clogged.
Leaking on solenoid valve	<ol style="list-style-type: none">1. Obstruction may be found in the solenoid valve.<ul style="list-style-type: none">• Attention: It is of high importance to check the machine after installation as lime scale or debris may be able to fall into the valve during installation. Shut off the water supply and take out the valve. Clean the valve and re-install.
Continue fill or cannot fill water	<ol style="list-style-type: none">1. Debris may be present in the solenoid valve, resulting in abnormal functioning.<ul style="list-style-type: none">◆ Caution: Detailed checking after installation is necessary as small chips may enter the pipes remain stuck in the valve. Power off, open the solenoid valve and clean the valve and re-install.2. Inlet water flow rate is too low.

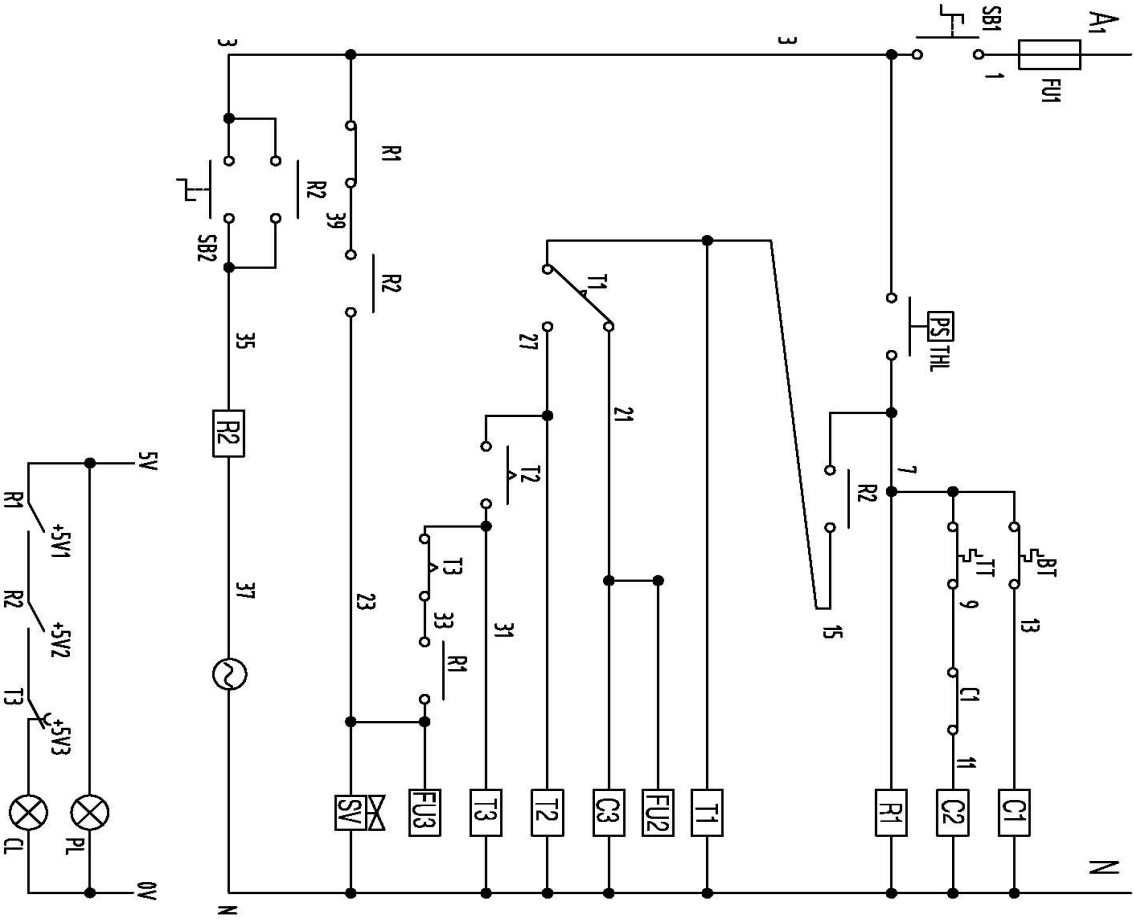




FU1	Fuse (5 Amp) / Dispenser Constant Supply
FU2	Wash Signal(5 Amp, Dispenser use)
FU3	Rinse Signal (5 Amp, Dispenser use)
T1	Wash Cycle Timer Control(90s)
T2	Pause Timer Control(4s)
T3	Rinse Cycle Timer Control(10s)
C1	Booster Heater Contactor
C2	Wash Tank Heater Contactor
C3	Wash Pump Contactor(1Ph)
SV	Fill / Rinse Solenoid
SBI	Machine On/Off Switch
SB2	Start Switch
PS	Pressure Switch
THL	Wash Tank Hi-Level
TLL	Wash Tank Lo-Level
BT	Booster Heater Thermal Control(86°C)
TT	Wash Tank Thermal Control(70°C)
R1	Wash Tank Hi-level Relay
R2	Door Control Relay
PL	Power Light
CL	Cycle Light
⊗	Door Safety Switch

IPh 220V





FU1	Fuse (5 Amp) / Dispenser Constant Supply
FU2	Wash Signal(5 Amp, Dispenser use)
FU3	Rinse Signal (5 Amp, Dispenser use)
T1	Wash Cycle Timer Control(9/8s)
T2	Pause Timer Control(4s)
T3	Rinse Cycle Timer Control(1/8s)
C1	Booster Heater Contactor
C2	Wash Tank Heater Contactor
C3	Wash Pump Contactor(1 Ph)
SV	Fill / Rinse Solenoid
SB1	Machine On/Off Switch
SB2	Start Switch
PS	Pressure Switch
THL	Wash Tank HI-Level
TLL	Wash Tank Lo-level
BT	Booster Heater Thermal Control(86°C)
TT	Wash Tank Thermal Control(70°C)
R1	Wash Tank Hi-level Relay
R2	Door Control Relay
PL	Power Light
CL	Cycle Light
	Door Safety Switch

3Ph 380V

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FOOTNOTE

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