



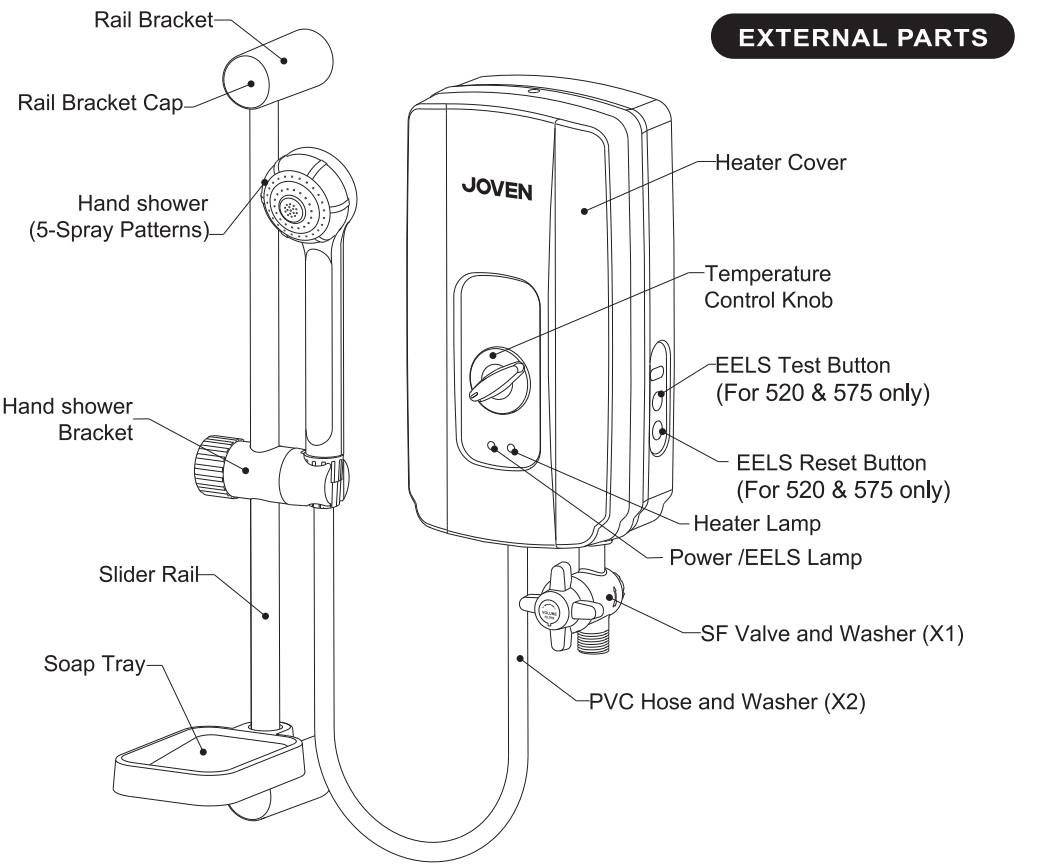
Thank you for selecting JOVEN Instant Water Heater. Please read this manual before installation and be sure to keep it handy for your future reference.



SAFETY PRECAUTION

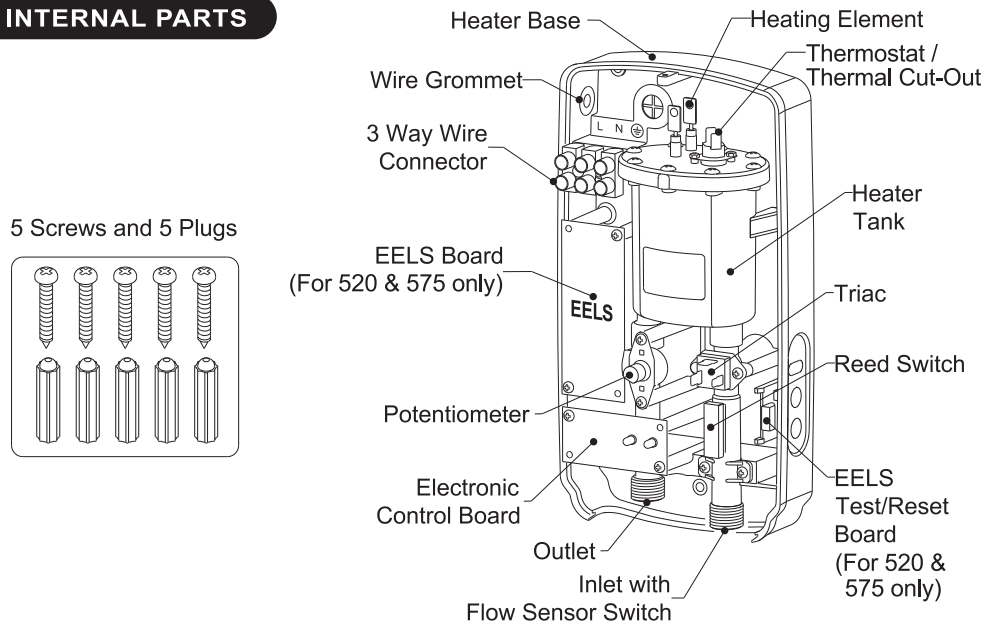
- This sign warns of serious injury, damage to property and potential death. Before operating, please read the following "Safety Precautions" carefully.

1 PARTS IDENTIFICATION



EXTERNAL PARTS

INTERNAL PARTS



2 SPECIFICATION

Electrical Loading	2.2 kW	10.0 A	220 Va.c.	50 / 60Hz
	3.0 kW	13.0 A	230 Va.c.	50 / 60Hz
	3.3 kW	15.0 A	220 Va.c.	50 / 60Hz
	3.3 kW	15.0 A	230 Va.c.	50Hz
	3.3 kW	13.8 A	240 Va.c.	50 / 60Hz
	3.5 kW	16.0 A	220 Va.c.	50 / 60Hz
	3.6 kW	16.0 A	230 Va.c.	50 / 60Hz
	3.6 kW	15.0 A	240 Va.c.	50 / 60Hz
	4.4 kW	20.0 A	220 Va.c.	50 / 60Hz
Min. Water Pressure	4.8 kW	21.0 A	230 Va.c.	50 / 60Hz
	5.2 kW	24.0 A	220 Va.c.	50 / 60Hz
Max. Water Pressure	10 kPa / 1.45 psi / 0.1 bar			
Min. Water Flow	380 kPa / 55 psi / 3.8 bar			
Max. Water Flow	2 Litres per Minute			
Water Temp. Control	8 Litres per Minute			
Inlet/Outlet Connection	Stepless Electronic Power Control			
ABS Casing	ø15 mm (1/2" BSP) - Single Point System			
Built-in EELS system (10mA Sensitivity)	Splash Proof Casing IP25			
Dimensions	Models: 520 & 575			
Weight	160 x 295 x 100 mm			
	510 & 565 - 2.3kg ; 520 & 575 - 2.4kg			

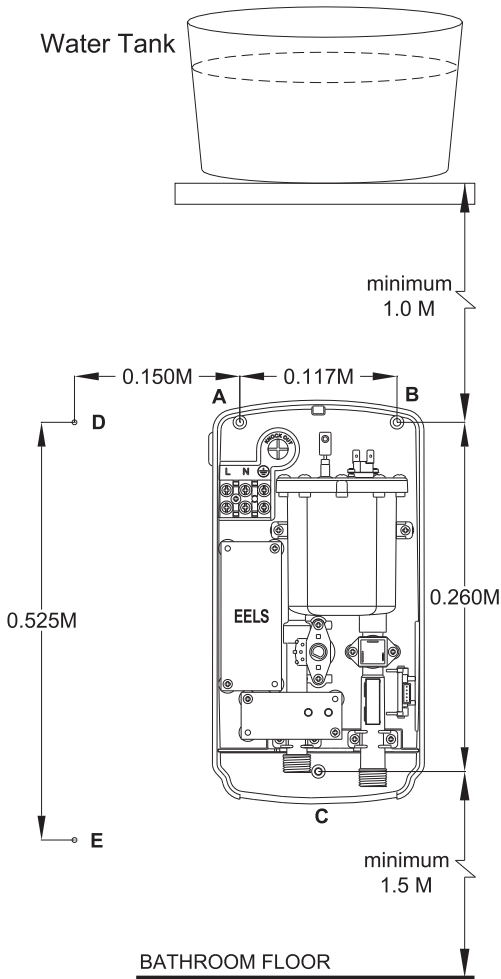
3 INSTALLATION INSTRUCTION

3.1 HEATER INSTALLATION



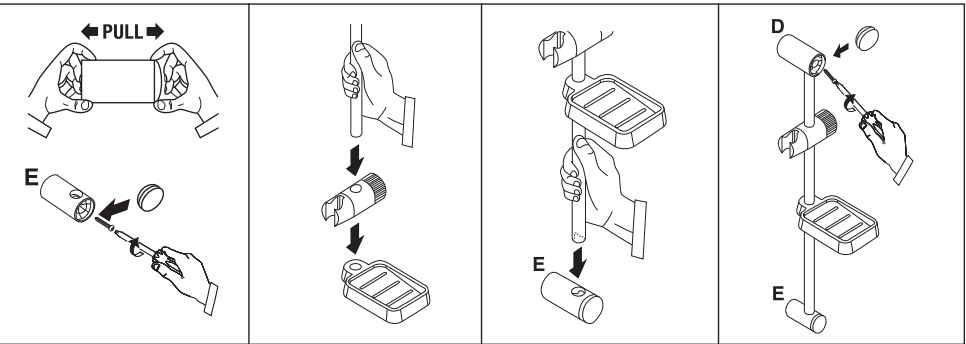
IMPORTANT

- Installation should be carried out by qualified personnel with close reference to the instruction manual and compliance to the local authority.
- This appliance must be installed indoor only.



- Remove the screws X & Y and gently lift up the cover.
- Select a suitable position in the bathroom, mark the screw points A, B & C on the wall with the heater base and screw points D & E for Rail Bracket.
Note:
 - The Heater position should be at minimum 1.5m from the bathroom floor and must be in a vertical position.
 - For direct connection to the water tank, the heater must have a minimum of 1.0m (3.3ft) below the water tank.
- Use ø5mm drill and make the wall plug holes to 25mm depth. Insert the wall plugs.
- Mount the heater firmly into position with the screw.

3.2 SLIDER RAIL SET INSTALLATION



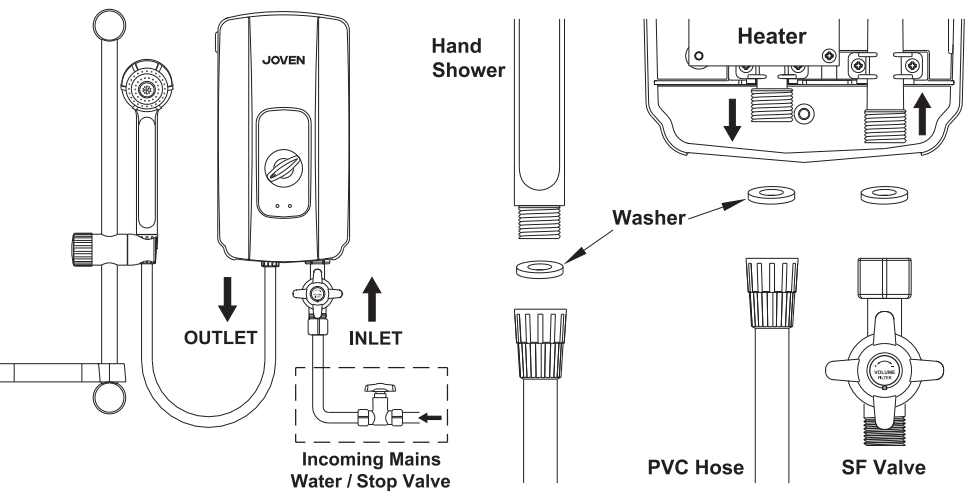
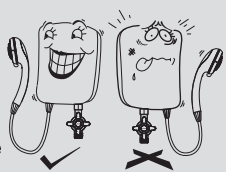
- Remove the cap from the rail bracket.
- Screw the bracket to the position 'E' and replace the cap.
- Insert the hand shower holder and soap tray into the slider rail.
- Insert the slider rail into the rail bracket. Making sure the groove end sits firmly.
- Repeat step 1 and screw the bracket to the position 'D' and replace the cap. Make sure the slider rail is firmly fitted into the rail bracket.

3.3 PLUMBING CONNECTION



IMPORTANT

- This heater is a single point system and the water outlet can only be fitted to the PVC Hose and Hand Shower Set provided. No control valve or fittings can be fitted to the water outlet.
- Metallic/chromed hose and conductive control valve shall not be used.



- Connect SF Valve to the water inlet by tighten the plastic nut & washer. Make sure the arrow facing upwards.
- Connect the incoming water plumbing end to SF Valve (1/2" BSP).
- Turn on the water supply and SF Valve to maximum volume to allow water flow into heater tank and drain out any plumbing particles through the outlet. Turn off the SF Valve.
- Connect the PVC Hose to the water heater outlet and the hand shower. Be sure to insert the washer to the outlet connection and hand shower, otherwise water will leak at the connector ends.
- Hook the hand shower to the hand shower holder and adjust to your ideal position.
- Turn on the SF Valve & check for any water leakage.

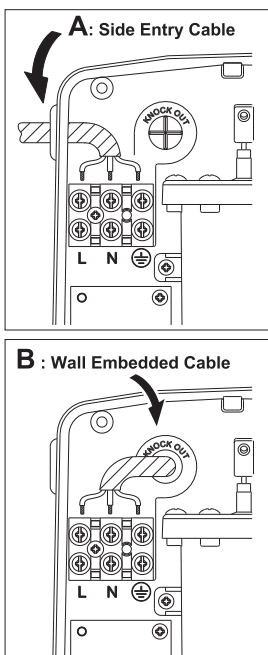
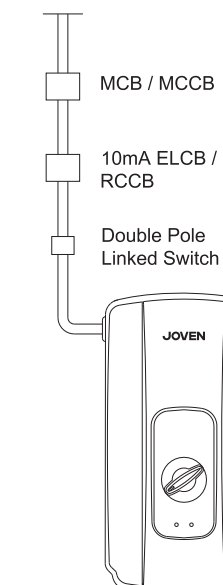
3.4 ELECTRICAL CONNECTION

IMPORTANT

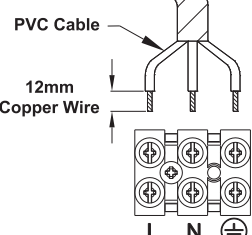
- All plumbing works must be completed and heater tank filled with water before proceeding to electrical connections. This will prevent any damage to the appliance.
- This appliance must be permanently earthed. The use of Plug & Socket is not recommended.
- It is recommended to use an approved current operated type Earth Leakage Circuit Breaker (ELCB) / Residual Current Circuit Breaker (RCCB) of 10mA Sensitivity and higher than rated current. (Refer to Table 1)
- It is recommended to use an approved type Miniature Circuit Breaker (MCB) or Molded Case Circuit Breaker (MCCB) of higher than rated current. (Refer Table 1)
- This heater must be permanently connected to the electrical supply through a Double Pole Linked Switch above rated current (Refer to Table 1) and having contact separation of at least 3mm in all poles incorporated in the fixed wiring. The switch must be out of reach from user in the bathroom.

Table 1: Electrical Loading Table

HEATER ELECTRICAL LOADING			MINIMUM CONDUCTOR SIZE			RATED CURRENT FOR CIRCUIT BREAKER / DOUBLE POLE LINKED SWITCH (A)
Voltage (Va.c.)	Power (kW)	Current (A)	Conductor Size(mm ²)	Conduit Cable (No. /ømm)	Flexible Cable (No. /ømm)	
220 50 / 60 Hz	2.2	10	2.5	7 / 0.67	50 / 0.25	16
	3.3	15	2.5	7 / 0.67	50 / 0.25	20
	3.5	16	4.0	7 / 0.85	56 / 0.30	20
	4.4	20	4.0	7 / 0.85	56 / 0.30	25
	5.2	24	6.0	7 / 1.04	-	32
230 50 / 60 Hz	3.0	13	2.5	7 / 0.67	50 / 0.25	20
	3.3	15	2.5	7 / 0.67	50 / 0.25	20
	3.6	16	4.0	7 / 0.85	56 / 0.30	20
	4.8	21	6.0	7 / 1.04	-	25
240 50 / 60 Hz	3.3	13.8	2.5	7 / 0.67	50 / 0.25	20
	3.6	15	2.5	7 / 0.67	50 / 0.25	20

Recommended Electrical Connection

- Switch off the electrical mains.
- Refer Table 1 for correct cable size.
- Insert the cable through 'A' for side entry by cutting a hole through the wire grommet; or 'B' for wall embedded cable by breaking the knock out point at heater base.
- Connect electrical wire as follow:
Brown or Red to L (LIVE)
Blue or Black to N (NEUTRAL)
Green or Green/Yellow to ⚡ (EARTH)

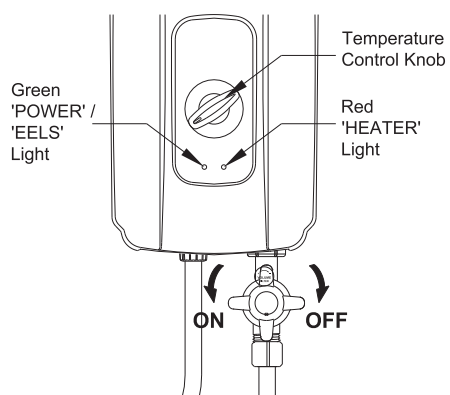
Recommended Stripping Length

- Check that the wiring connection is correct and properly tightened.
- Replace the cover.

4 OPERATING PROCEDURE

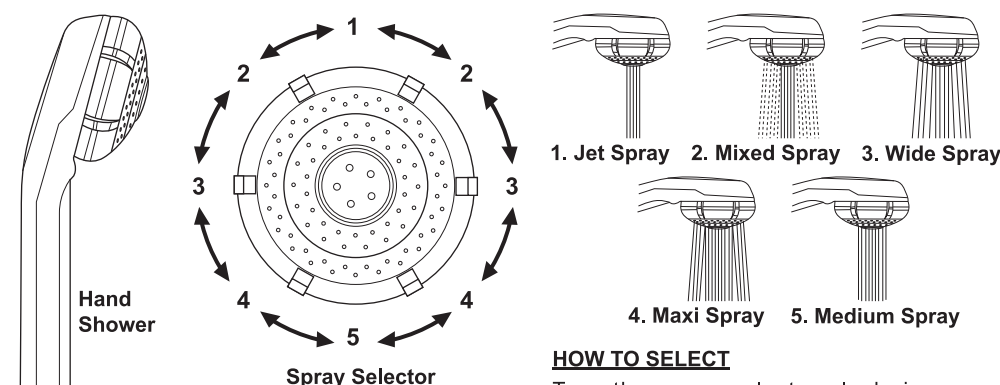
IMPORTANT

- Make sure the heater tank is filled with water before switching on the electrical supply. Failure to do so will damage the appliance and void the warranty.
- This appliance is not intended for use by young children or infirm persons without supervision.
- Do not switch ON if there is a possibility that the water in the heater is frozen.
- This appliance must be switched off after use.



- Switch on the electrical supply. Green 'POWER'/'EELS' light will turn on.
- Turn on the SF Valve in anticlockwise direction and water will flow through the hand shower.
- For hot shower, turn on the temperature control knob. Red 'HEATER' light will turn on. Adjust the temperature control knob for comfortable shower temperature.
- After shower, turn off the SF Valve & switch off the electrical power supply.

5 5 SPRAY PATTERN HAND SHOWER

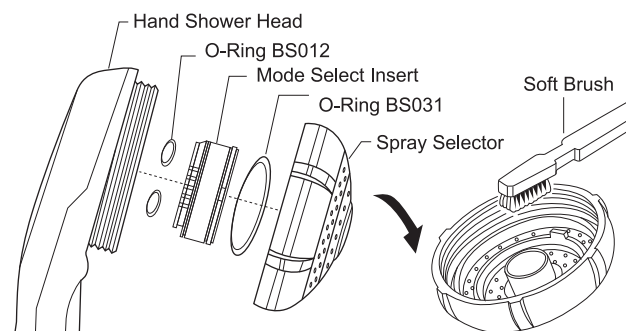
**HOW TO SELECT**

Turn the spray selector clockwise or anti-clockwise until you get the desired flow.

Note: When the spray selector reaches the stopper position, turn to opposite direction.

How to Clean Hand Shower

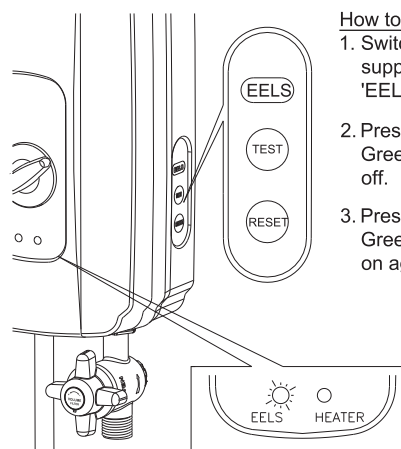
Rotate the spray selector in a counter clockwise direction. Remove the Mode Select Insert and use soft brush to remove the scale deposited at the holes.

**How to Clean Heater Cover**

Use a damp cloth with mild detergent to clean heater cover. Do not use abrasive cleaner or organic cleaner (such as alcohol, petrol or thinner).



6 EELS MAINTENANCE (For Model 520 & 575 Only)

**How to Test EELS?**

- Switch On Electrical supply, Green Light 'EELS' will turn on.
- Press 'TEST' Button, Green Light will turned off.
- Press 'RESET' Button, Green Light will turned on again.

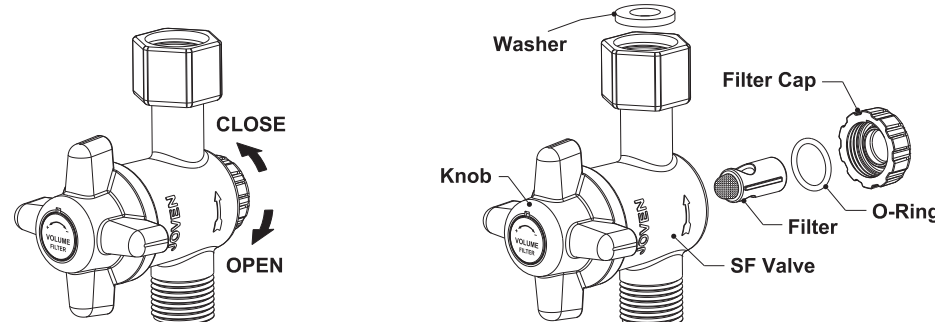
Built-in EELS System (Electronics Earth Leakage Sensor) with Surge Protector

This extra safe built-in EELS system with 10mA sensitivity will cut off the electrical supply to the heater in the event of current leakage from the heater. Thus preventing the user from fatal electrical shock.

WARNING

- It is recommended to test the built-in EELS once a month.
- If the 'EELS' light does not go off each time the test button is pressed or does not come on when the reset button is pressed, contact our service centre nearest to you or your sales agent for repair. **DO NOT TRY TO REPAIR IT YOURSELF.**

7 CLEANING SF VALVE FILTER



This innovative and compact Stop & Filter Valve (SF Valve) helps to control and filter the inlet water. Turning the knob anticlockwise will turn on the flow while turning the knob clockwise will shut off the water. The filter inside the SF valve should be cleaned whenever there is a sign of inlet water blockage. This can be done by loosening the filter cap and pulling out the filter and clean it with soft brush.

- Note: i) Make sure to turn off the incoming water supply before the operation.
ii) This has to be done more regularly in areas where the inlet water supply is dirty.

8 TROUBLESHOOTING

1. Check the following points for better performance:

SYMPTOMS	POINT TO CHECK FOR REMEDY
A. No water coming out of the heater	<ul style="list-style-type: none"> Check whether all stop valves are opened Check whether the water supply is there Check and clean the hand shower and shower cap if it is clogged by dirt Check and clean the SF Valve and filter if it is clogged by dirt
B. Heater is not working	<ul style="list-style-type: none"> Check whether power supply is ON Check whether water supply is very low (Heater requires minimum pressure of 1.45psi or water flow rate of 2 litres per minute)
C. Shower not hot enough	<ul style="list-style-type: none"> Adjust the temperature control to higher setting Check whether water flow is too strong. Reduce the water flow to get hotter shower. (Less water, more hot)

2. If any of the following abnormalities found during usage, contact our service centres nearest to you or your sales agent immediately:

- Water leakage
- Insufficient water running
- Water temperature cannot be controlled
- POWER / EELS and HEATER lamp does not light up
- EELS continuously tripping (Model 520 & 575 only)

**IMPORTANT**

NEVER TRY TO REPAIR THE UNIT YOURSELF, SPECIAL SKILL IS REQUIRED

9 PRODUCT WARRANTY

WARRANTY VOID

- This warranty does not cover lightning, natural disaster, pest attacks, fire, negligence, misuses, accidents, floods, pollution, abuse or neglect, improper installation or improper maintenance and abnormal voltage or the usage of generator.
- Failure to follow the instruction manual.
- Repair or attempted to repair this product by anyone not authorised by JOVEN.
- Any unit which has been altered or on which the serial number has been defaced, modified or removed.

* Note: Refer to your local distributor for warranty terms & conditions

Manufactured by **JOVEN ELECTRIC CO.**

