

A Quality Product
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**CG CHAUDHARY[®]
GROUP**
Touching life everyday



Operation Manual



Electric Water Heater

MODEL : CGEW15F02/CGEW25G02

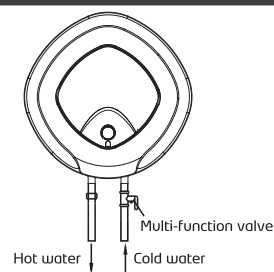
Thank you for selecting CG Electric Water Heater
Before Operating this unit, Please Read this Operation Manual Completely

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ORIENT STORAGE WATER HEATER

Thank you for choosing Orient Storage Water Heaters. These are domestic water heating appliances use a water storage tank to maximize their heating capacity and provide ample hot water. Every water heater is ISI-marked and adheres to the highest quality standards. Not only are these water heaters fast and efficient, but are also loaded with safety features. Each storage water heater comes equipped with cutting-edge features such as a heavy copper element, PUF insulation, and much more.

KNOW YOUR WATER HEATER



This image is for reference only.
Actual product might differ.

SOME OF THE KEY FEATURES THAT MAKE ORIENT WATER HEATERS THE BEST

- Tank:** Orient Storage Water Heaters come with two types of tanks:
 - Glassline-Coated Tank:** Made of mild steel with glass enamel coating on the inside and tested at double-rated pressure to normal working pressure. This prevents corrosion and leads to high performance of the tank. Hence, is suitable for both hard water and soft water.
 - High-Grade Stainless Steel Tank:** Made of 304L grade stainless steel. It is suitable for both hard and soft water and is tested to withstand from double-rated pressure to normal working pressure.
- Heating Element:** It is a direct immersion and mineral element, housed in a copper tube, and defines the rate of heating and energy efficiency of the water heater. Orient offers you two types of heating elements:
 - Glassline-Coated Heating Element that provides enhanced protection against corrosion and leads to effective heating of water.
 - Heavy Copper Heating Element with nickel-coated tank that provides efficient heating while saving energy.
- Magnesium Anode Rod:** These are customised alloy rods that work in different water conditions and are used to protect the inside metal surface of your water heater tank components for a long time. Orient Water Heaters have a 27% heavier magnesium rod that prevents harmful compounds from corroding the water heater.
- Multi-Function Valve:** Orient Water Heaters have valves that are specially placed for safety purposes and prevent the heater from malfunctioning during abnormal conditions, like high pressure. The four functions of this tamper-proof valve are:
 - Pressure Relief Valve:** Used to release excess pressure created inside the tank while heating, thereby protecting it from explosion.
 - Vacuum Relief Valve:** It is used to allow air to enter into the piping system to prevent a vacuum. It prevents siphoning of the water heater.
 - Non-Return Valve:** It avoids the return of water from the water heater back to supply, thereby preventing dry heating.



- Drain Valve:** The drain valve is used for cleaning and maintenance when the water heater is not in use or there is less water coming out of the outlet tube.



- PUF Insulation:** It is an effective and durable heating insulation that has a long life and is relatively low-maintenance. PUF insulation keeps the tank heated, thereby keeping the water warm for long hours while preventing the external body from heating up. Our models are also free from CFCs (Chlorofluorocarbons), compounds that contribute to ozone depletion in the upper atmosphere, thereby preventing the depletion of the ozone layer.
- Pressure Rating CLASS I:** Our water heaters are designed to work at maximum pressure at the inlet. It is recommended that maximum line pressure of water at the inlet is checked and an appropriate model is selected to ensure a trouble-free performance. Special care is taken while installing the water heater in multi-storeyed /high-rise buildings, or at locations where hydro-pneumatic pumping systems are being used to supply water.



- Light Indicator:** Green and red indicators mounted on the water heater depict operation. The red "Power" indicator and green "Heating" indicator remain ON while there is power to the system. The green indicator will turn off when the water temperature reaches the preset level.



- Thermostat:** Orient Water Heaters have a thermostat, which is a primary safety device designed to control or maintain the temperature within a safe range in the tank.



- Thermal Cut-Out:** Orient Water Heaters have a thermal cut-out, which is a secondary safety device to cut off power at a preset temperature if the thermostat fails. This also helps in preventing dry heating of the element in case there is no water in the tank.



- Power Cable With Moulded 3-Pin Plug:** We provide an ISI-marked cable that gives you a guarantee of authenticity.

TECHNICAL SPECIFICATIONS

Model Name				
Model No.		CGEW15F02	CGEW25G02	
Capacity (Ltrs)		15 Ltrs	25 Ltrs	
Power Consumption		2000W	2000W	
Heating Element		Glassline-Coated	Glassline-Coated	
Energy-Efficiency Rating		4 Star	4 Star	
Tank Type		Glassline Coated	Glassline Coated	
Outer Body		Plastic	Plastic	
Installation		Vertical	Vertical	
Pressure Rating (Bar)		8	8	
Magnesium Anode Rod		Yes	Yes	
Multi-Function Valve		Yes	Yes	
Inner Container Testing		Tested in 16 Bar	Tested in 16 Bar	
Thermostat Type		External / Adjustable	External / Adjustable	
Dimensions (mm)	Width	330	385	
	Depth	340	395	
	Height	490	550	
Warranty*	Tank	5 Years In Inner Tank		

Preset Thermostat: 72°C ± 3, Preset Thermal Cut-Out: Set to operate at 95°C, Insulation: PUF, CFC-Free.
As product up gradation is a continuous process, design and specifications are subject to change without prior notice.
*Applicable in India only.

INSTALLATION GUIDE

- Always get a qualified plumber/electrician for the installation, in compliance with the local authority regulations.
- There should be enough space around the water heater for easy installation and servicing.
- This water heater should be installed on a solid wall. If the strength of the wall cannot bear the load equal to two times of that of the total weight of the heater filled fully with water, it is then necessary to install a special support.

In case of a hollow brick wall, ensure to fill it with cement concrete completely.

- Fix the water heater in a perfectly straight position at a suitable height from the floor, or on the loft with bolts. This will ensure easy removal whenever required.
- The water heater should be operated in a splash-proof condition. For this, please keep a minimum distance of 1.8 meters between the floor and the bottom of the water heater.
- If the installation space is less, the water heater should be installed at another place. The length of the connecting pipes should be less in order to reduce pipeline heat losses.
- After selecting a proper location, install the mounting bracket on a solid wall with anchors and fasteners, securing the brackets firmly.
- Install the supply socket in the wall. The power supply should be 230V~50Hz.

वाटर हीटर स्थापना गाइड

- वाटर हीटर स्थापना के लिए हमेशा योग्य प्लंबर/इलेक्ट्रीशियन से संपर्क करें और स्थानीय प्राधिकरण नियमों का अनुपालन करें।

- आसान स्थापना और सर्विसिंग के लिए वाटर हीटर के आस-पास पर्याप्त जगह होनी चाहिए।

- यह वाटर हीटर एक ठोस दीवार पर स्थापित किया जाना चाहिए। अगर दीवार की ताकत पूरी तरह से पानी से भरे वाटर हीटर के कुल वजन के दोगुना भार को सहन नहीं कर सकती है, तो इसके लिए एक विशेष सहारा स्थापित करना आवश्यक है।

खोखले ईंटों की दीवार में पूरी तरह से सीमेंट कंक्रीट का भराव सुनिश्चित करें।

- वाटर हीटर को फर्श से या बोल्ट के साथ लॉफ्ट पर उपयुक्त ऊंचाई पर पूरी तरह से सीधी अवस्था में स्थापित करें। यह आवश्यक होने पर वाटर हीटर को आसानी से हटाने में मदद करेगा।

- वाटर हीटर को जलरोधक स्थिति में संचालित किया जाना चाहिए। इसके लिए, कृपया वाटर हीटर के तल और भूमि के बीच 1.8 मीटर की न्यूनतम दूरी रखें।

- अगर स्थापना स्थान कम है, हीटर को किसी अन्य स्थान पर स्थापित किया जाना चाहिए। पाइप लाइन से ऊष्मा में नुकसान को कम करने के लिए कनेक्टिंग पाइप की लंबाई कम होनी चाहिए।

- उचित स्थान चुनने के बाद, दीवार में मजबूती से ब्रैकेट को सुरक्षित करने के लिए एंकर और फास्टर के साथ ब्रैकेट को स्थापित करें।

- दीवार में आपूर्ति सॉकेट स्थापित करें। बिजली की आपूर्ति 230V 50Hz होनी चाहिए।

WHAT TO DO

- It's advisable to switch OFF the power supply when the unit is not in use.
- Use mild detergent to remove dirt and clean with a wet cloth.

WHAT NOT TO DO

- Safety devices like safety thermostat, pressure release valve, etc. are pre-set and sensitive devices. Complete care is taken in manufacturing and testing this process to ensure long-term, smooth operation of these devices. Do not tamper with them at any cost as this could be hazardous and may even nullify the warranty.
- In case you observe any abnormality of operation or sound coming from inside the water heater, immediately switch OFF the main power supply and contact the nearest authorised service centre.
- Never install a pressure reducer valve at the inlet.

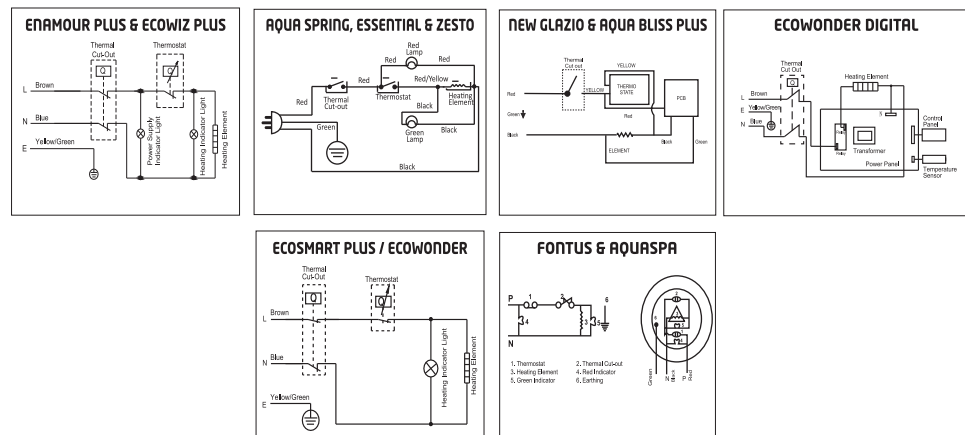
WATER SUPPLY AND CONNECTION

- We recommend the use of Orient connecting pipes.
- Connect the water heater via a dead weight valve if the water pressure is more than 65 N/cm² and 80 N/cm².
- The minimum height difference between the water heater and water supply should be 2 meters.
- In case of a direct municipal water supply, a vacuum relief valve (VRV) should be used.
- Do not connect cold and hot water supplies directly to the water heater.
- Always use flexible hosepipe connections. Never use plastic tubes, especially at the outlet, as they cannot withstand the heat produced in extensive use. In case of a direct connection, lightening of couplings through wrench can damage the water heater.
- The dimension of each pipe is G1/2"; the massive pressure of the inlet should use Pa as the unit. The minimum pressure of the inlet should use Pa as the unit.
- Always use control/gate valve at the inlet & outlet. Do ensure that the valve at the inlet is always open when in use.

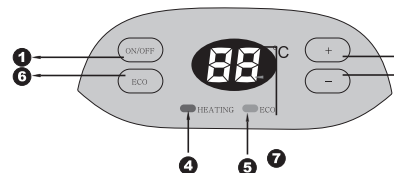
ELECTRICAL WIRING

- The electrical connection must be done by a qualified electrician.
- All electrical connections in the water heater are completed at the factory. The water heater is provided with a supply cord and a plug (ISI certified fire-retardant cable).
- The electrical supply is connected directly to the connector provided with the earth connection.
- The ground wire must be green/yellow in color and attached to the terminal marked by the symbol.
- The red light indicates that the electricity supply is on.

ELECTRICAL WIRING



ECOWONDER DIGITAL PANEL DISPLAY (AS SHOWN):



- "1" is the "ON/OFF" button
- "2" button is "+", to adjust the setting temperature
- "3" button is "-", to adjust the setting temperature
- "4" is the "HEATING" indicator light
- "5" is the "ECO" indicator light
- "6" is the "ECO" button
- "7" is the temperature display

FACTORY SETTINGS

Fuction	Temperature Setting
Factory Setting	75°C
ECO Mode	55°C

FAULT DIAGNOSIS

- **Dry heat:** When the system detects the interior temperature rise slope $\geq 15^\circ\text{C}/\text{min}$ or when rising slope $\geq 8^\circ\text{C}/30\text{S}$, and the temperature exceeds 50°C , the display flashes the fault code "E2".
- **Overheat:** When interior temperature sensor temperature exceeds 90°C , it is deremined that over-temperature, display flashes error code "E3".
- **Sensor Fault:** In case of sensor open circuit, short circuit, display flashes error code "E4".

ERROR CODR FOR SERVICE TECHNICIAN USE

E2: Dry Heat - Top up with water and re-heat.
E3: Overheat - Check the heating system or replace it.
E4: Sensor Fault - Check the sensor or replace it.

OPERATING INSTRUCIONS

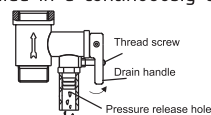
- Do not switch on the power supply before filling the water heater or else it will damage the heating element.
- The pressure release valve is the most important pre-calibrated safety device provided with the water heater to prevent the inside pressure from increasing. Kindly do not tamper with it.
- Open the hot water outlet valve.
- Open the inlet valve to allow water to fill inside the water heater until it starts flowing from the water outlet valve.
- Check all the piping connections for leakage before turning ON the electric power of the water heater.
- Always keep the inlet valve open.
- You can switch on the power supply. The glowing green light indicates that water is heating. When water is heated to a prefixed temperature, the green light indicator switches OFF and a red light glows. The red light continues to glow until the power supply is switched OFF.
- The thermostat ensures that the electric supply is always switched ON & OFF. Check the working of lights, to ensure the thermostat & thermal cut-out are operational.
- Turn ON the main electrical power supply and then adjust the temperature knob clockwise for a higher temperature & anti-clockwise for a lower temperature.
- The water heater needs to be turned ON for a certain period of time to reach the desired temperature.
- During the heating process, it is normal to see a slight drip at the safety valve. Please do not cover the safety valve outlet.
- This water heater must be installed with a mono-directional safety valve at the inlet pipe (blue indicator) when the tank's pressure is over 0.8 Mpa. This will automatically activate the safety valve and water will exit the drainpipe outlet. This outlet must not be blocked under any circumstance.

CAUTION AND MAINTENANCE

In order to avoid a hazard due to an inadvertent resetting of the thermal cut-out, the water heater must not be supplied through an external switching device such as a timer, or connected to a circuit that is regularly switched ON and OFF by the utility.

- The supply socket must be earthed reliably. The rated current of the socket should not be lower than 16A. The socket and plug should be kept dry to prevent electrical leakage.
- When using the heater for the first time (or the first use after maintenance), the heater cannot be switched on until it is full of water. When filling water, at least one of the valves at the outlet of the heater must be opened to exhaust the air. This valve can be closed after the heater has been filled with water.
- The water heater is not intended for use by people (including children) with reduced physical, sensory or mental capabilities, or a lack of experience and knowledge, unless they have been given supervision or instructions concerning the use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the heater.
- During heating, there may be drops of water dripping from the pressure release hole of the pressure relief valve. This is a normal phenomenon. If there is a large amount of water leaking, please contact an authorised service centre for repair. This pressure release hole should, under no circumstances, be blocked, otherwise it may damage the appliance and may result in accidents.
- The drainage pipe connected to the pressure release hole must be kept sloping downwards. Since the water temperature inside the heater can reach up to 75°C , avoid exposure to human bodies when initially used. Adjust the water temperature to a suitable temperature to avoid scalding.
- If the flexible power supply cord is damaged, the special supply cord provided by the manufacturer must be selected, and replaced by professional maintenance personnel.
- If any parts or components of this water heater are damaged, please contact the Orient Helpline Number for repair.
- Remove sediments regularly from the element and tank.
- The maximum inlet water pressure is 0.8 Mpa or 0.65 Mpa; the minimum inlet water pressure is 0.1 Mpa. This is necessary for correct operation of the appliance.

- The water may drip from the discharge pipe of the pressure relief device and this pipe must be left open to the atmosphere. The pressure relief device is to be operated regularly to remove lime deposits and to verify that it is not blocked.
- If the water heater is not used for a long time, especially in regions with low air temperature (below 0°C), it is necessary to drain water from the tank to prevent damage due to freezing. To do so, contact an authorised service agent.
- In order to drain away the water in the inner container, use the pressure release valve. Twist the thread screw of the pressure release valve off, and lift the drain handle upwards. A discharge pipe connected to the pressure relief device is to be installed in a continuously downward direction and in a frost-free environment.



- Check the power plug and outlet as often as possible. Secure electrical contact and also provide proper grounding. The plug and outlet must not heat excessively.
- To ensure long, reliable water heater operation, it is recommended to regularly clean the internal tank and remove deposits on the electric heating element of the water heater, as well as check the condition (fully decomposed or not) of the magnesium anode and, if necessary, replace it with a new one (in case of full decomposition). Tank-cleaning frequency depends on the hardness of water located in the territory. Cleaning must be performed by special maintenance services. You can ask the seller for the address of the service center.
- The water heater is equipped with a thermal switch, which cuts off the power supply of the heating element upon water overheating or its absence in the water heater. If the water heater is connected to the mains, but water has not heated and the indicator doesn't light up, then the thermal switch is switched off. To reset, contact the authorised service centre.

TROUBLESHOOTING

S.No.	Problem	Cause	Solution
1.	Indicator light does not light up	1. The power source is not connected or improperly connected 2. Indicator may be damaged 3. Thermal cut-out is activated 4. Failure of temperature controller	1. Check for power supply or try plugging the product in a different power socket 2. Get a qualified technician to check the electrical wiring and indicators 3. If the problem persists, visit the nearest authorised service centre
2.	Water temperature at the outlet is low	1. No power supply to the water heater 2. Check in case there is any drop in the voltage 3. The element may be defective 4. Thermostat is at low setting	1. Check for power supply or try plugging the product in a different power socket 2. Get the outlet flow reduced (approx. 2 litres/minute) 3. Contact the toll-free Orient helpline number for assistance
3.	No water from the warm water tap	Main water valve is not switched ON	Turn ON the main water supply
4.	Electric shock from the water heater	Any of the internal parts may be defective	1. Check the earthing of the green wire 2. Contact the toll-free Orient helpline number for assistance
5.	Water leakage	1. Leakage from the plumbing connection 2. Leakage at the gasket	1. Get the connection tightened 2. Tighten the element or replace the gasket through an authorised service centre 3. Ensure that the height difference between the water heater and the overhead tank is not more than the maximum specified limit 4. Check and regulate the inlet water pressure so that it is not more than 50 PSI
6.	Electrical mains tripped	1. Short circuit of the heating element 2. Low MCB rating	1. Contact the toll-free Orient helpline number for assistance 2. Check the MCB rating to which the water heater is connected. Connect only to 15/25 AMPs rated socket/MCB
7.	Cable failure (plug, cut, branding, damaged)	Cable may be defective	Contact the toll-free Orient helpline number for assistance
8.	The water heater creates an abnormal noise	Scaling of the heating element	Contact the toll-free Orient helpline number for assistance
9.	Outlet water blockage	Scaling at the outlet pipe's opening end	Contact the toll-free Orient helpline number for assistance
10.	Smell comes from the water heater	Unit has not been used for many days	Flush out twice the amount of water as the capacity of the water heater