EVERYTHING GAS

GAS MEN Pty Ltd

Reg Nr. 2014/135820/07
Vat Reg Nr. 4540268762

Everything Gas and Atlas geyser workshop.

8h30am Find a seat.
Gas geyser operating environment discussion
Things to look out for when doing a quotation to ensure correct operation.

Plumbing:

Water connections to the geyser (ensure easy removal, correct sizing without restriction)
Sanitary ware (water saver shower heads, mixer taps etc)
Correct geyser sizing to accommodate your clients' needs.
Distances (water runs, pipe sizing and type of water pipe)

Gas installations:

Gas runs
Regulator sizing
Pipe sizing
Correct gas cylinder sizing

9h30am Introduction to our new and existing gas geyser range:

Types of Atlas gas geysers
The differences between, diaphragm, low pressure, force fan and constant temperature gas geysers
What to expect from your gas geyser
What size, type and where to use different geysers

10h30am Trouble shooting:

Question & Answer
Most common faults will be demonstrated, and solutions discussed.
Repairs demonstrated step by step.
You will be given the opportunity to find problems and make repairs on geysers provided, Rigged with specific faults by our team.
We will divide into groups and each group will be given a geyser with a different problem to work on. We will be interacting with each group and answering any questions.

REFRESHMENTS AND LUNCH WILL BE SERVED

Thank you for attending our geyser workshop.

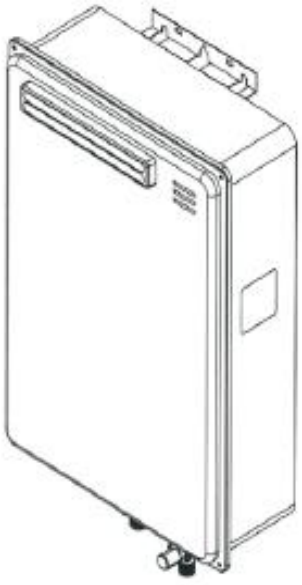
ATLAS™

INSTRUCTION MANUAL

FOR 20 LITRE DOMESTIC INSTANTANEOUS GAS WATER HEATER

FOR OUTDOOR INSTALLATION ONLY

PLEASE READ THESE INSTRUCTIONS CAREFULLY.
RETAIN THIS INSTRUCTION MANUAL FOR FUTURE REFERENCE



WARNING
TO BE INSTALLED BY APPROVED LPG GAS INSTALLER ONLY

THIS WATER HEATER MUST BE INSTALLED IN ACCORDANCE WITH I.A.W. AND SANS10087-1.
IT MAY ONLY BE INSTALLED BY AN LPGSA CERTIFIED INSTALLER (See Page 5 F)

THERE IS A SECTION THAT THE INSTALLER MUST COMPLETE. THIS WILL SERVE AS YOUR WARRANTY.

A. MODEL NAME

Name: Atlas
Model: JSW40-20A1HX.
20 L Turbo Fan Outdoor installation only.

B. PRODUCT FEATURES

(1) For installing outside-safe and reliable

(2) DC forced ventilation, forced combustion, smaller size unit

(3) Constant temperature control with digital display, convenient and easy to set to required temperature.

(4) Features a Gas Stabiliser that adapts to unstable gas pressures

(5) Low starting water pressure (100kPa)-suitable for most areas

(6) Electric impulse ignition, ensures stable and fast ignition

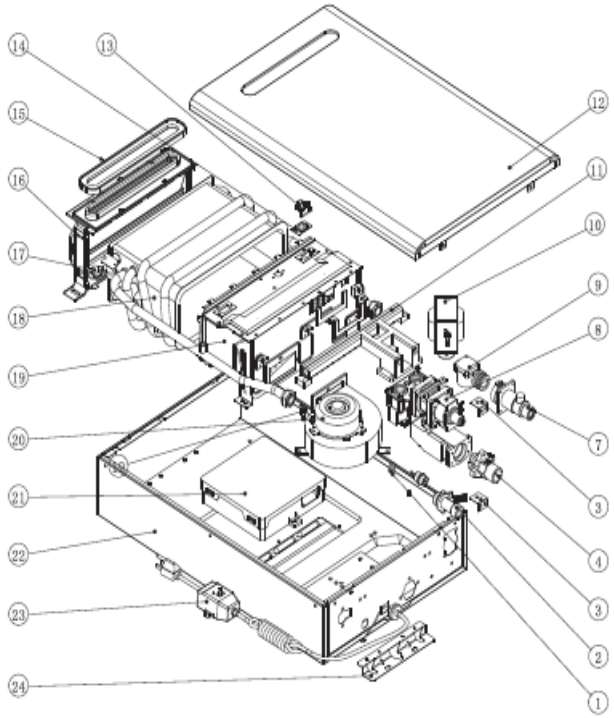
(7) Manifold safe devices used

(8) Automatic self-detecting function, auto alarm with special Error Codes

(9) Wired Remote Control for easy operation (or no wire hand held remote control)

(10) High Power Unit with considerably strong water output, supplying sufficient water to more than one outlet at once.

C. PRODUCT LINE DRAWING AND OUTSIDE PART IDENTIFICATION



Code	Name	Quantity
24	Bottom support	2
23	Power cord	1
22	Bottom panel	1
21	Control unit	1
20	Fan	1
19	Burner	1
18	Heat exchanger	1
17	Temperature controller	1
16	Chimney	1
15	Chimney gasket	1
14	Clamp of sensor pin	1
13	Sensor pin	1
12	Front panel	1
11	Dispatcher	1
10	Transformer	1
9	Water flow sensor	1
8	Combustion proportional valve	1
7	Water inlet connector accessory	1
4	Gas inlet connector	1
3	Control unit support	2
2	Water outlet connector accessory	1
1	Lock ring	1

H. CONTROLLING SYSTEM & ERROR CODES

This geyser is fitted with the function of self-detecting malfunctions and errors. Required water temperature, actual water temperature, and other kinds of malfunctions and errors can be shown on the operation plate. Different errors will show as follows:

E0 Error from Water Temperature Sensor
E1 Error from Ignition
E2 Error from Flame
E3 No Water or too High Temperature
E5 Error from Fan
E6 Too high Water outlet temperature

GET THE GEYSER BE CHECKED BY YOUR INSTALLER OR OUR SERVICE CENTRE BELOW.

I. AFTER SALES SERVICE

If you find any malfunctions when using this water geyser, please contact our authorised after sales service centre or make direct contact with our company:

Atlas Furniture & Appliance Distributors (PTY) Ltd.
101 Terrace Road, Sebenza Edenvale
TEL: 011 452 5959
FAX: 011 452 7911

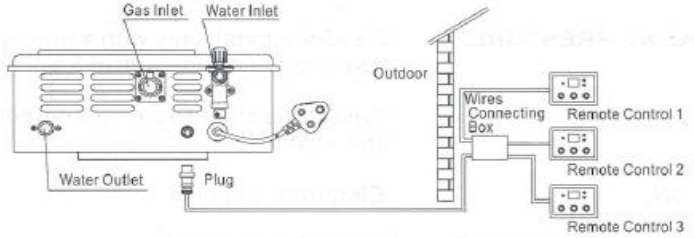
F. INSTALLATION

Notes for the LPGSA registered Installer:

FIT A REGULATOR NO SMALLER THAN 3 KG/HR

(i) To be installed in accordance with I.A.W. and SANS 10087-1
(ii) Although this is a weather proof unit, it must be installed in a reasonably protected environment (under overhang of roof or

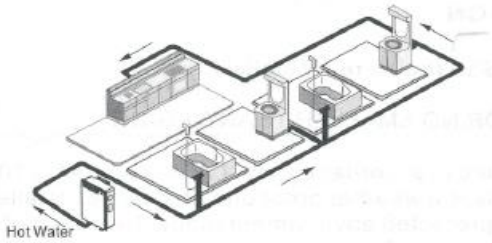
(iii) Install away from any combustible materials.
(iv) Install at least 500mm above the ground.
(v) As the exhaust is in the front cover, ensure that the unit is installed facing away from the local main wind.
(vi) Install away from windows and doors so that combustion emissions cannot drift into the house or any other structures.



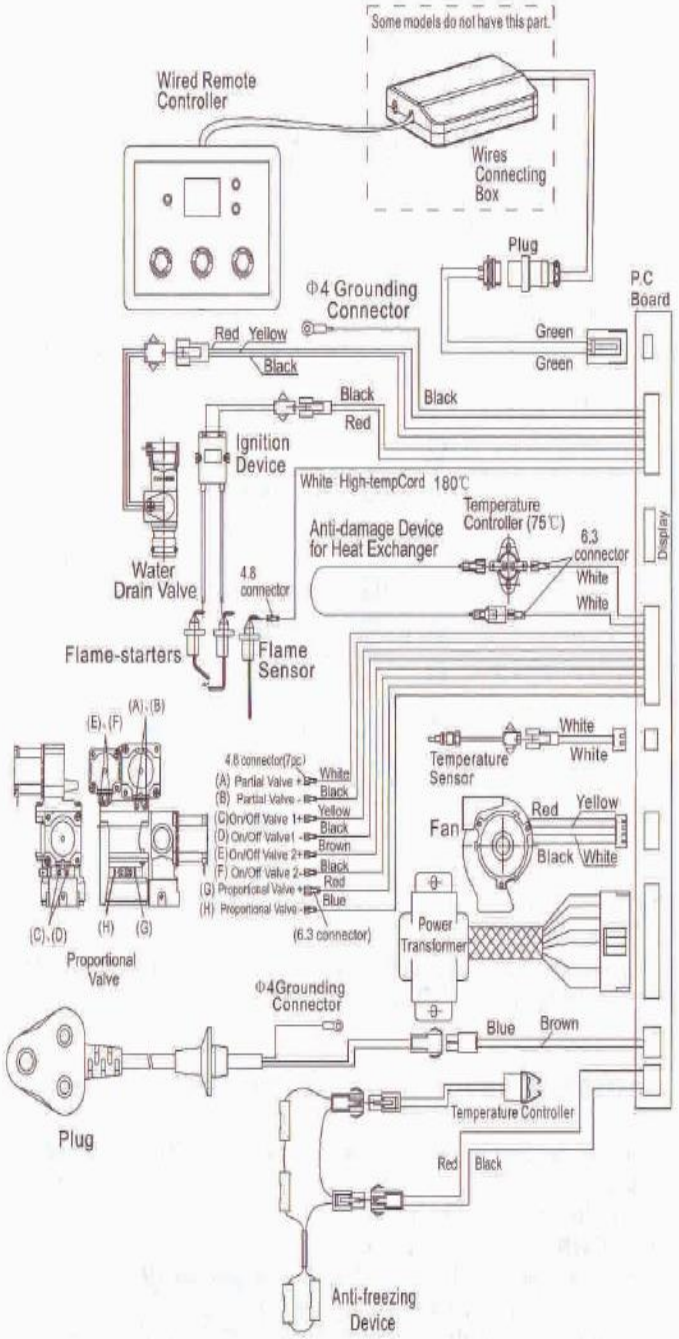
Figure

PIPE INSTALLATION

See low pressure pipe sizing Table 3 Module 5 in your Basic Installers' Course manual.
Too narrow diameter piping over a long distance can cause the unit to underperform below its capability.
Maximum distance for 15mm piping is 6 metres for this geyser.
When exceeding 6 metres, use 22 mm piping.



K. CIRCUIT DIAGRAM



J. TROUBLE SHOOTING

Malfunctions / Probable Causes	Flame goes out during use	No flame after opening water inlet and outlet	Yellow flame with smoke	SOLUTION
Gas Valve not opened long enough or gas cylinder is empty	O	O		Fully open gas valve or change to a new cylinder
Airlock in gas pipe		O		Turn the unit on and off continuously until ignition successful
Water outlet valve closed		O		Fully open water outlet valve
Frozen Water		O		Wait until defrosted
Water pressure too low	O	O		Have the a professional inspect the water pressure and pipelines
Safety Device light on	O	O		Refer to Error Code
Error from Water flow sensor	O	O		Contact After Sales Service Centre
Error from Pulse Ignition Device	O	O		
Loose lead wire	O	O		Reconnect
Error from electromagnetic valve	O	O		Contact after sales service centre
Error from feed back electrode	O			
Error from Fan	O	O	O	
No power supply / power off	O	O		Switch on power supply

If the above solutions do not solve your problem, or you experience other malfunctions, please ask your installer to check your geyser or contact our After Sales Service Centre for repair.
You are not allowed to disassemble or repair the geyser yourself as it may cause accidents. Please DO NOT use the unit when there is a malfunction.

CHOOSING WIRE REMOTE CONTROLLER ADDRESS

This heater can be connected to several wired remote controllers, so you should assign an address to each controller. You can do this by following these instructions:
Press 'DOWN' then release button after 'Ad' displays. Press ON/OFF, then choose 'Add 1' or 'Add 2' by pressing 'UP' or 'DOWN' and exit to 'Ad' by pressing 'ON/OFF' again.
Choose 'qu' to save data by pressing 'UP' or 'DOWN' and then 'ON/OFF'. Exit by turning off the power supply after that.
Switch on power supply again, then to begin using the geyser.
The main remote control is preset at the factory, and is included with this geyser. Optional additional controllers can be purchased at your Dealer.

20L FORCE FAN E5 FAN SPEED ADJUSMENT

1. Turn the display off on the Keypad.
2. Unplug the geyser.
3. Wait 1 minute.
4. Plug the geyser in again (do not switch the keypad on).
5. Immediately after connecting the geyser to power, press and hold the DOWN-key on the keypad until it displays “PP” which is programming mode.
6. Immediately Press “ON/OFF” which will work as your ENTER key to take you to the different modes.
7. Using the UP-key scroll through the different modes (it should pass through -FA, PH, PL, DH, NE, DP, THEN “**HC”**).
8. Press enter (ON/OFF) on HC, the value should be around 80. Using the UP key adjust the fan speed to 90.
9. Press Enter and the keypad should display HC again.
10. Using the UP-key and scroll until the keypad displays “**QU**”.
11. Press enter and the settings should be saved.

Ⅰ.E0: Outlet temperature sensor fault

1. Checking if outlet temperature sensor loose or short circuit.

① Checking if outlet temperature sensor looms loose or not, and check all looms loose or not.

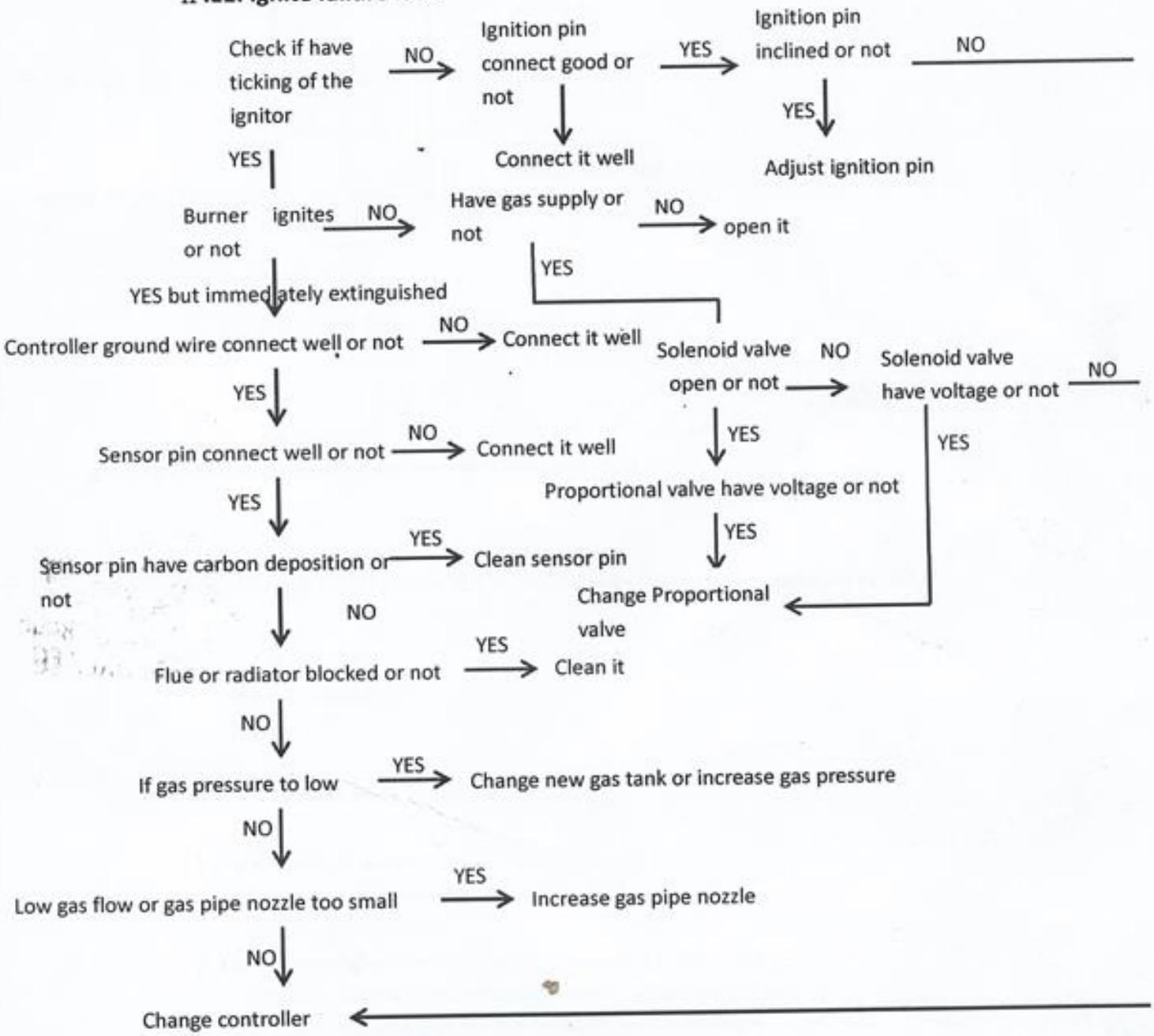
② Change new outlet temperature sensor

2. Outlet temperature water overheat

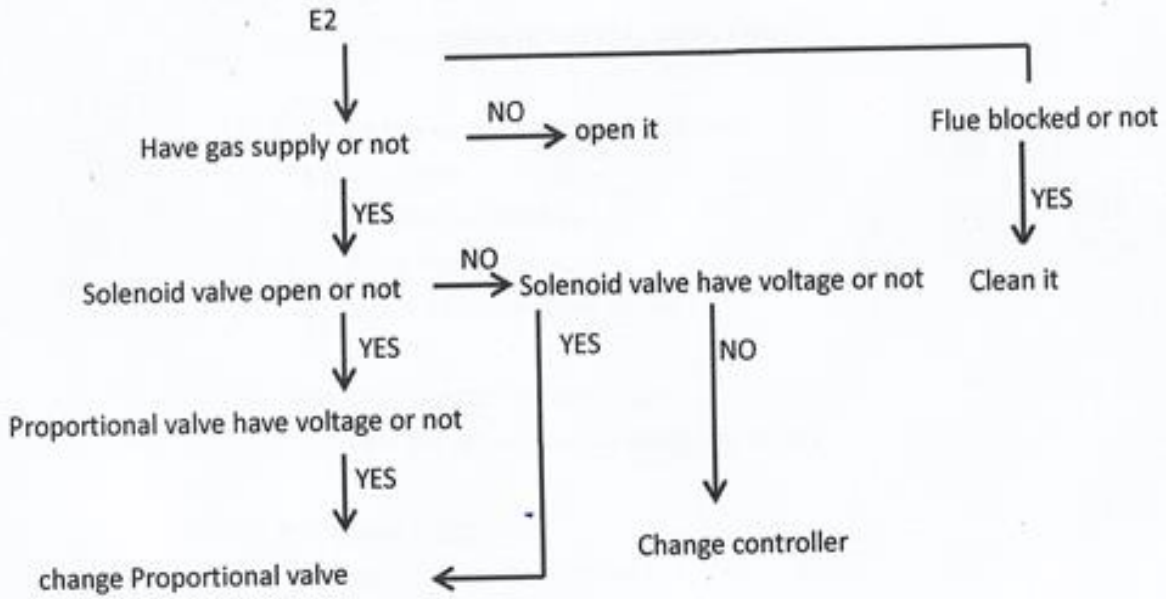
①Reduce outlet temperature degree

②Increase water inlet volume

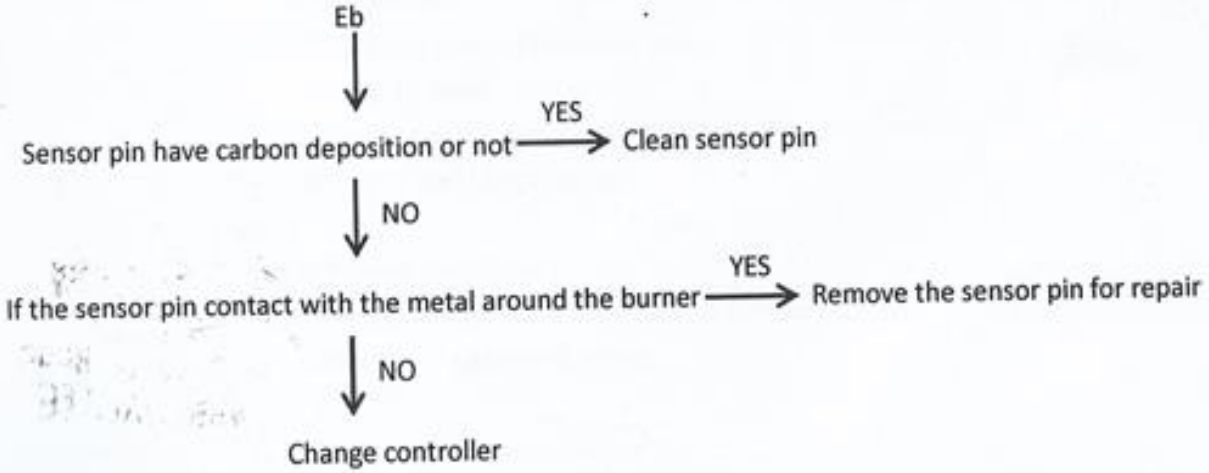
Ⅱ.E1: Ignite failure fault



Ⅲ. E2: Midway flameout fault



Ⅳ.Eb: False fire fault



Ⅴ. E3: Thermostat fault

1,The thermostat is disconnected during startup

① Check if all looms loose or not

②change thermostat

2. The thermostat is disconnected during normal combustion

① Check whether the outlet water temperature is too high

② Shut down and wait for the thermostat to cool down

Ⅵ.E4: over temperature protection

In the normal combustion process, the effluent temperature is ≥80℃ for 1 consecutive second

Reduce temperature or increase water flow

Ⅶ. E5: The fan or wind pressure fault

1. Flue blocking

   Clean flue or chimney

2. Fan does not turn

   ① Check if all looms loose or not

   ②Change fan

3. The wind resistance value is low

   Increase the wind pressure value (HC value)

Ⅷ. E7: Valve fault

① Check if all looms loose or not

②Change valve

Ⅸ.E8: Water inlet sensor fault

1. The inlet water temperature sensor is disconnected or short-circulted

   ① Check if all looms loose or not

   ② Change water inlet sensor

2. The inlet water temperature exceeds the upper limit

   ①Lower inlet temperature

Ⅹ.En:Timed shutdown

The water heater burns continuously for the set time

Turn off the water and restart

Ⅺ.Ec: communication failure

1. Replace display
2. change looms between PCB controller & LCD display

180
175
120
115
Temperture Controller
Temperture Fuse Wire
Grounding Connector/d4.2
Water drain valve
Output Temperture Sensor
Input Temperture Sensor
Frame Sensor
Frame-Intake Fan
Grounding Connector/d4.2
Wired Remote Controller
Wired Remote Controller

G40.S2B.1-5

20L FAN FORCED NOTES:

Automatic Instantaneous Water Heater W60-LU

Display controller

The Control Panel and display are used to adjust the operational settings of the unit as well as give information about the current state of operation. The following illustration shows all possible symbols and signs that may appear in various states of operation. In operation only the symbol or sign corresponding to the actual state will appear on the control panel display. The water heater is in an operating state when the hot water temperature is shown.



Includes convenient H2O Saver Technology™, a digital functionality that allows owners to control hot water consumption and conserve water.

Max. Water Pressure: 145PSI (1MPa)
Min. Water Pressure : 1.5 PSI（0.01034 MPa）

This is Equal to:

Maximum water pressure: approximately 10 bar (9.99 bar)

Minimum water pressure: 0.1 bar

The unit has a gas consumption rating of 4.8 Kg/h, thus meaning that it should be installed with a minimum regulator size of 10kg/h for an efficient work environment.

CONTROL PANEL INDICATIONS

LED display for LU Series,

1.Power on and press the button in the middle of the knob, the water heater is in the startup state. At this time, the temperature display displays the current set temperature, the temperature setting range is 35 ℃ ~ 60 ℃ (95F-140F), and the factory default setting temperature is 42 ℃.

2.The water heater can be used in three modes, including “High”, “COMF” and “LOW”. The factory default is AUTO mode.

"AUTO " mode: the water heater automatically matches the best operation state according to the temperature needs set by the user.

"High " mode : the setting temperature is 50℃(122F).
“COMF”mode: the setting temperature is 45℃(113F).
“LOW” mode: the setting temperature is 37℃(99F).

3. "Flame icon": indicates the current working state of the water heater. When the flame icon is always on, it indicates that the water heater is in working state. When the flame icon is not on, it indicates that the water heater is in standby or fault standby state.

"WiFi icon": indicates the current networking status of the water heater. When the WiFi icon is always on, it indicates that the water heater is successfully networked. When the WiFi icon is not on, it indicates that the water heater is disconnected.

"Fan icon": indicates the current state of the water heater fan. When the fan icon flashes dynamically, it indicates that the water heater fan is in operation. When the fan icon is not on, it indicates that the water heater fan is in static state.

"Water flow icon": indicates the water flow status in the water heater. When the water flow icon flashes dynamically, it indicates that the water in the water heater is in circulation. When the water flow icon is not on, it indicates that the water heater is in the state of water cut-off or too small water flow.

The periphery of the knob can be rotated: used to set the water temperature or set the water injection volume in the bath mode. Each time you turn the knob, set the temperature to increase or decrease by one degree, and set the water injection volume to increase or decrease by 20L each time. If you need to quickly set (temperature or water injection), you can turn the knob continuously.

Mode selection button: the user can select and set the current mode through the mode selection button. With each click, the water heater exits the current mode and enters into the next working mode.

Button in the middle of the knob: used to control the shutdown / standby / fault reset and other working states of the water heater.

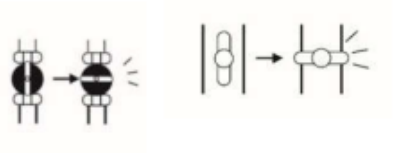
EXTENDED SHUTDOWN

Extended Outage Procedure

If a heater will be out of service for an extended amount of time, use the following procedure to protect the unit.

NOTES
*After a power outage, all settings return to their factory default values.

⚠ CAUTION The heater and water within the unit may be very hot. Allow time for the system to cool and use caution when draining to minimize risk of injury.

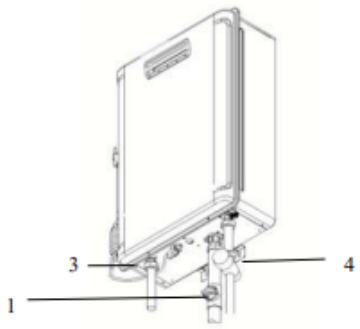


1.Shut down the water heater by pressing the "ON/OFF" button.

2. Close the fuel gas valve (1).
3. Unplug the power cord (3).

4. Use dry hands. Exercise caution and only unplug by grasping the plug head
and pulling. Note, all factory settings will be restored next

5. Close the water inlet valve. (4)
6. Open all hot water faucets.
7. Obtain an appropriate container to collect the residual water from the system.



Routine Inspection Checklist
□Any flammable materials in the vicinity of the water heater ?
□Any unusual noises coming from the heater while in operation?
□Are the air intake and exhaust free from any blockage or foreign objects?
□Signs of water leakage around the water heater or pipes?
□Any signs of water leaking near heater or pipes?
□Any abnormal appearance to unit casing?

Maintenance Checklist
□Clean outside of unit and control panel
□ Use a wet cloth to remove any surface dirt. Use a dry cloth to wipe it dry.
□A very mild detergent may be used if unit is very dirty.
□Never use any petroleum based cleaners or solvents. These solvents can damage the panel.
□Check and clear Air Intake of any debris that might impede air flow.
□Clean inlet water screen
□Clean inside of unit by vacuuming or blowing out dust that collects in the unit. Do not open the burner this cleaning should only be done by authorized service personnel.
□Visual flame inspection
□Lime scale cleaning (if required)

MAINTENANCE PROCEDURES

BURNER INSPECTION AND CLEANING

1. The burner must flame evenly over the entire surface of the burner head when operating correctly.
2. The flame should burn with a clear, blue, stable flame.
3. Presence of a yellow flame or of black deposits on the burner head indicates cleaning and/or burner replacement should occur.

MAINTENANCE BLOWER

1. The fan motor is permanently lubricated and does not require periodic lubrication.
2. If the engine fails, it must be replaced by a qualified technician only.

PURGE THE PRESSURE RELIEF VALVE

If a pressure relief valve discharges periodically, this may be due to thermal expansion occurring in a water supply system in a closed circuit. Contact the water supplier or local plumbing inspector for the best way to solve this problem. Do not block the pressure relief valve.

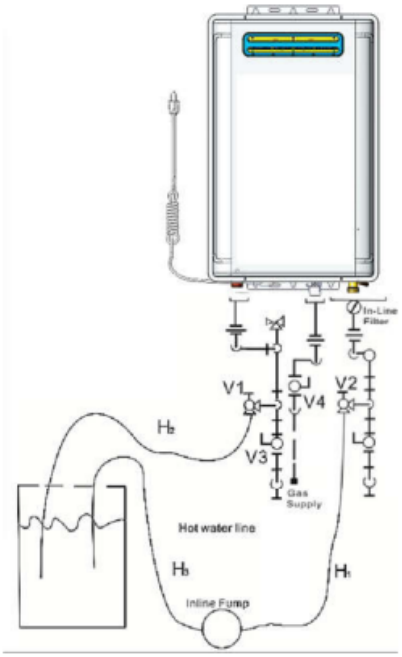
LIME SCALE CLEANING PROCEDURE

Materials required:

- o Five gallon container
- o Four gallons of virgin food grade white vinegar or virgin food grade citric acid
- o Small inline recirculation pump capable of circulating 2 - 4 gpm (8 – 16 l/m)
- o Set of hoses for connecting recirculation pump to and from the pump and the five gallon container.

Refer to the diagram on the next page to complete this procedure.

1. Disconnect electrical power to the water heater.
2. Close the shutoff valves V3 and V2 on both the hot water and cold water lines.
3. Connect a hose H1 form the pump outlet to the cold water line V2 into the heater.
4. Connect drain hose H2 from the hot water outlet line V1 and route into five gallon recirculation container.
5. Pour approx. four (4) gallons of virgin, food grade,white vinegar or citric acid into pail.
6. Place the pump suction hose H2 into the cleaning solution
7. Open valves V1 and V2 into the water heater.
8. Operate the pump. Circulate the cleaning solution through the water heater for at least 45 minutes.
9. Turn off the pump.
10. Rinse the cleaning solution from the water heater by closing valve V2 and opening valve V2, flow water through the heater and into a container or drain for at least five minutes.
11. Close Valve V1 and Open Valve V3 this places the house back online.
12. Disconnect all hoses.
13. It is also wise to clean the water inlet screen at this time. Close Valve V3 and V2 to do so.
Clean the water inlet screen and remove any debris.
14. Replace the screen and open valves V3 and V2 once more. Checks for leeks.
15. Return heater to operation by following start up instructions.



Note: Please check water heater for an error code and respond according to recommendations found in "Error Codes" portion of this manual.

issue	Possible Cause	solution
No power: Power indicator lamp is not lit	Power outage	Unit requires 120V power. Use unit when power is restored. Check circuit breaker and reset if needed. Check ground fault circuit interrupter (GFCI) if circuit includes one and reset if necessary.
	Unit is unplugged	Check power plug and ensure properly plugged. Plug the power plug properly.
There is no hot water flow when a hot water faucet is opened.	No/empty fuel source	Fuel gas valve needs to be open Refill source tank (if applicable)
	Water valve closed	Open the water inlet valve.
	Power outage	Unit requires 120V power to operate.
	Flow is too low or became too low. (less than 0.66 gallons per minute (gpm) or 2.5 liters per minute (l/m)	Flow is below the lower limit necessary for stable burner operation and proper temperature control. Increase the hot water flow to enable system.
	Freezing temperatures may have frozen water in the heater or hot water system.	See "No Flow Due to Expected Frozen Heater" section of this manual for procedure to thaw unit.
	Fuel gas meter special control restrictions	Some fuel gas valves may have special restrictions or digital controls that use. Consult your gas supplier and/or a service professional for assistance.
	Distance from heater to source is long	Allow time for hot water to travel through system to reach the point of use.
The hot water coming appears white and turbid.	Small bubbles may appear when water is heated. Air dissolved in water may evolve when water is heated.	None. Normal operation.
Vent system trouble	Vent system is restricted in some manner.	Check air intake and exhaust ducts to ensure they are not damaged, corroded, blocked, etc.
"Smoke" observed coming from exhaust system during cold temperatures	Water vapor produced during combustion is condensed in the exhaust as the hot gas is cooled by the outside air.	None. Normal operation.
Water leaking from safety valve outlet	Water system is operating above design pressure.	Consult professional for system review.
	Safety valve is damaged.	Replace safety valve. Consult professional as required.
Blower fan noise can be heard for some time after operation stops.	The blower is designed to run for 30 seconds after burner shuts off.	None. Normal operation

Hot water is not the right temperature (too hot or too cold)	Temperature set point was reset due to power outage.	Power outage restores default settings and custom set points must be re-entered to unit
	Flow is beyond capacity	Desired water flow is above maximum capacity of unit. Reduce user flows to re-establish control of temperature
	Incoming water is too warm	If incoming water to unit is very warm and the flow is just above minimum requirements, the heat generated by the burner while operating at minimum capacity can make the water hotter than desired. Increase the hot water user flow so that the burner system can control the temperature.
Hot water flow produced is lower than expected	Water source is restricted	Check and fully open water inlet valve(s) Check and clean inlet water screen
	Heat exchanger in unit is scaled	Clean heat exchanger by flushing per maintenance procedure.
	Incoming water temperature is colder than expected	Colder than normal incoming supply water will reduce the amount of hot water than can be produced. Although the amount of heat output from the unit is still at full capacity, you must reduce the user flow and operate within the capacity range of the heater.

The volume alarm does not sound even though the volume appears to be adequate	Units incorrect during input	Refer to "H2O SAVER TECHNOLOGY™ - Set a Desired Volume" section to ensure units (metric vs. English) and volume (displayed volume number represents 1/10th of the actual total flow) are correctly set.
	Measuring flow of only hot water instead of hot water and cold water combined	The volume measurement only keeps track of the water volume that passes through the water heater. If hot water going to a tub is combined with cold water, the volume computed would not be representative of the total amount that may have been dispensed.
Unresolved problem	Other assistance required	Consult supplier or contact an authorized service professional.

DIAGNOSTIC CODES

Whenever a failure occurs, an alert sounds and a diagnostic code is displayed to indicate the failure mode at the time of occurrence.

The following table includes a list of diagnostic codes that can be displayed as well as recommended remedies to address the problem.

Error Code	Possible Cause	Solution
E0	Outlet water temperature sensor failure	Contact a dealer or qualified service technician
E1	Ignition failure	Check the gas pressure, no gas or gas pressure lower Press the ON/OFF to Reset; Contact a dealer or qualified service technician
E2	Flame failure(during working)	Check the gas pressure, no gas or gas pressure lower; Press the ON/OFF to Reset; Contact a dealer or qualified service technician
E3	Dry burning(over temperature) protection	Temperature higher than 85℃ has been detected. Check the water pressure, water pressure too low. Contact a dealer or qualified service technician
E4	Inlet water temperature sensor failure	Contact a dealer or qualified service technician.
E5	Fan failure	Contact a dealer or qualified service technician.
E6	Water sensor overheat protection	Inlet temperature≥75℃, check the temperature sensor; Outlet temperature≥85℃,check the temperature sensor
E7	Proportional valve or Solenoid valve failure	Contact a dealer or qualified service technician.
E8	Flue pipe outlet blockage	Check the air intake/exhaust flue duct; Press the ON/OFF to Reset
E9	False Flame	Press the ON/OFF to Reset; Contact a dealer or qualified service technician

INSTALLATION

INSTALLATION GUIDELINES

Only properly qualified personnel should install this equipment. Improper installation orinstallation by a non-qualified installer may void warranty. Failure to comply with state and local codes pertaining to water heater installations may void also warranty.

Water heaters are suitable for installation as a single stand unit or in
Installation involving combinations of multiple units (i.e. parallel or series). These guidelines are for the installation of a single unit. Please contact supplier for multiple device connection assistance.

This appliance shall NOT be installed intdoors.

The appliance and its gas connection must be leak tested before placing the appliance in operation. A qualified installer or service technician should inspect and leak test system before use.

Maximum and minimum inlet gas pressure:

Models	Inlet gas pressure	
	Max.	Min.
W60-LU	13.0"wc(3.23kPa)	8.0"wc (1.99kPa)

LOCATION

Choose a location for unit installation taking into account the following guidelines.

• Unit must be installed outdoors. Installation is not recommended in bathrooms, bedrooms or occupied rooms that are normally kept closed.

• Unit should have proper clearance as indicated below including ample clearance in front of unit for proper service access.

• Installation is recommended to be at a height that will allow easy viewing and operation of the control panel.

• Heater requires a standard three prong, 220-240 V /50- 60 Hz grounded AC power outlet within X feet of installation location.

• Heater requires a ¾"gassupplyline(20mm).

• Ventilation requirements must be considered when choosing installation location.Minimizing vent piping will reduce installation costs and maximize efficiency.

CLEARANCE REQUIREMENTS

ADJACENT MATERIAL COMPOSITION				
	NON-COMBUSTIBLE		COMBUSTIBLE	
SIDE	4 inches	100 mm	6 inches	150 mm
TOP	10 inches	250 mm	12 inches	300 mm
FLOOR	12 inches	300 mm	12 inches	300 mm
FRONT	24 inches	600 mm	24 inches	600 mm
FRONT	zero	zero	**1 inch (25 mm) fireproof insulating panel required**	

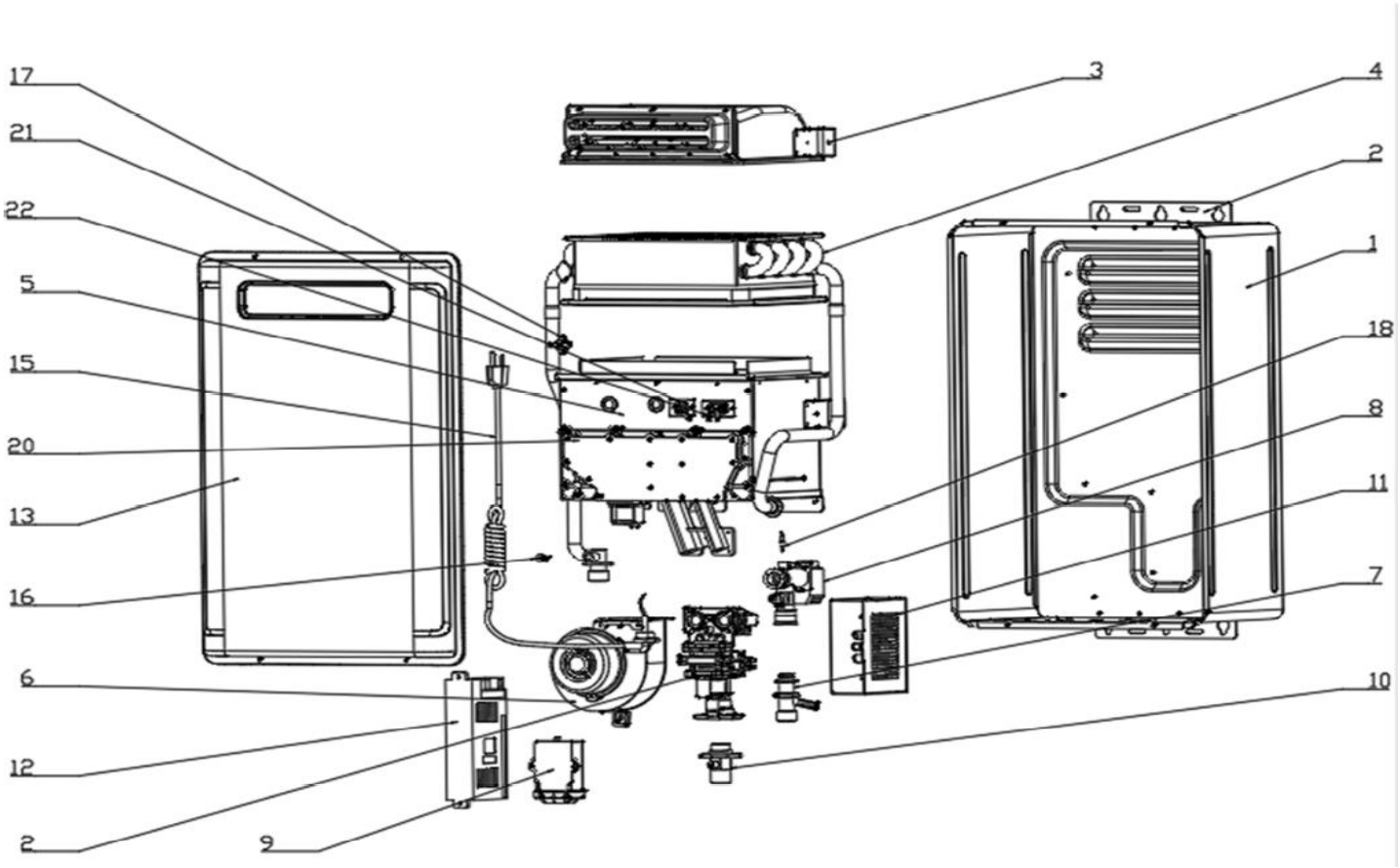
INITIAL START UP

1. STOP! Read the safety information from the previous page.
2. Ensure unit is unplugged and all electric power to the appliance is off.
3. Locate the manual gas valve to the heater. Open the manual gas valve for 15-30 seconds.
4. Turn the manual valve clockwise to the full OFF position.
5. Carefully check for any sign or smell of gas. If gas is detected, wait five (5) minutes for it to clear. STOP and go no further until gas leak point is detected.
6. If no gas is detected, open the manual gas valve for five (5) minutes and again check area for any signs of gas. At any sign of gas, STOP and go no further. Follow the safety precautions from the previous page.
7. If no gas is detected, proceed.
8. Open the water supply valve to the unit. Inspect for any leaks
9. Visually inspect air intake inlet and exhaust to ensure they are not obstructed.
10. Plug in the unit.
11. Press the "ON" button to turn on the unit.
12. Adjust the temperature set point per "Temperature Control" Section of this manual.
13. This appliance is equipped with an ignition device that automatically lights the burner. Do not try to light the burner by hand.
14. Open a hot water tap to a flow above the minimum flow point (0.66 gpm/ 2.5 l/min).
15. The burner control system will fire the igniter, the burner will light, and hot water will be produced.
16. If the heater will not operate, follow the shut down instructions. Wait 5 minutes and attempt to repeat this start up procedure.
17. If system does not operate, begin troubleshooting per "Trouble Shooting" section of this manual. Contact supplier.

Model No		W60-LU
Type of Appliance		Gas-fired instantaneous tankless water heaters
Operation		mounted in outdoor environment
Flue System		Outdoor type
Available default Temperatures		Factory setting 107℉
Temperature Range		Within 35℃～ 60℃ （95℉～140℉）
Dimensions (mm)	Width	390
	Height	615
	Depth	240
Net Weight (kg)		22
Connections	Gas	G1/2
	Cold Water Supply	G1/2
	Hot Water Supply	G1/2
Ignition System		PULSE IGNITION
Max./Min. Gas Consumption	Natural Gas	60kW--8kW
	Propane Gas	60kW--8kW
Hot Water Delivery Capacity Max.		30L/ min (△t=25K)
Noise level		58 dB
DOE.		0.81
Minimum Operating Water Flow		2.0L/min
Minimum Operating Pressure		0.01MPa
Max. water pressure		1.0 MPa
Power Supply		220-240 V /50- 60 Hz /1A, one phase
Electrical Consumption(Normal)		52 w

Model No.	W60-LU
Rated gas pressure	5.6" wc (1390Pa)

NAMES OF MAJOR PARTS AND COMPONENTS



22	ST12-10B	IGNITION NEEDLE	1
21	ST13-11	FLAME FEEDBACK SENSOR	1
20	ST01.143-1	GAS PIPE	1
18	Q24.12H5-5	WATER INLET TEMP. SENSOR	1
17	ST06-04(Q20-R)	THERMOSTAT 85°	1
16	D20.DG-5	OUTLET WATER TEMP. SENSOR	1
15	ST08-27(G32-HG16HWA)	AC POWER PLUG	1
13	W60_LU_01	FRONT COVER ASSY.	1
12	ST15.156-0(G60-LE)	PCBA	1
11	ST15.155-0(Q52-LE)	SWITCH POWER	1
10	ST18.4-1(Q52-LE)	GAS INLET CONNECTOR	1
9	ST17-84(W60-LU)	Display controller	1
8	ST03.10-0(G60-LE)	WATER PROPORTIONAL VALVE	1
7	ST18.3-0(Q52-LE)	WATER INLET CONNECTOR	1
6	ST14-56(Q52-LE)	FAN ASSY.	1
5	ST01.143-0(G60-LE)	BURNER ASSY.	1
4	ST05-102(G60-LE)	HEAT EXCHANGER	1
3	ST10_61_01(W60-LU)	DRAFT DIVERTER	1
2	G60.LE.2-6	MOUNTING BRACKET	2
1	W60_LU_02	BACK COVER ASSY.	1
NO	DRAWING NO.	PART NAME	QTY

LU-CONTROLLER MANUEL FOR WI-FI FUNCTION

Content

-OPERATION GUIDANCE
-FUNCTION OF THE APP

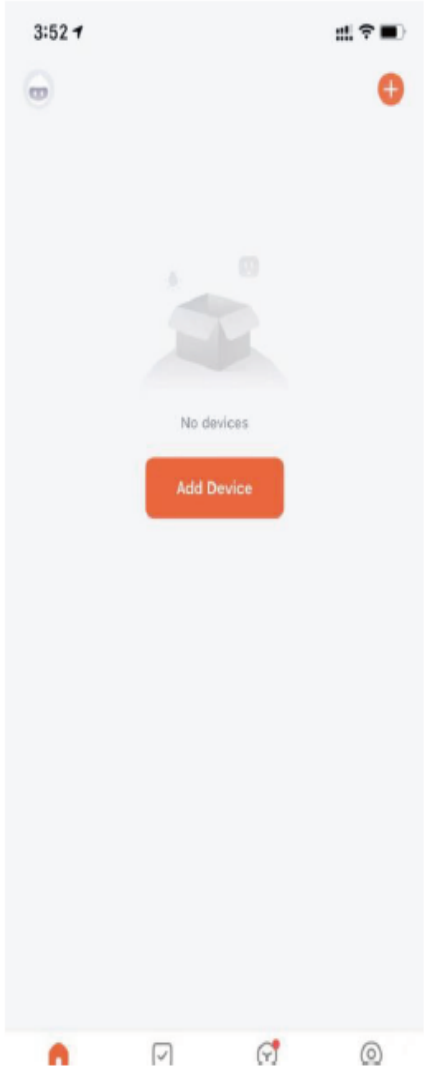
OPERATION GUIDANCE

1. Find "Tuya Smart" in app store or scan below QR code to download the app.

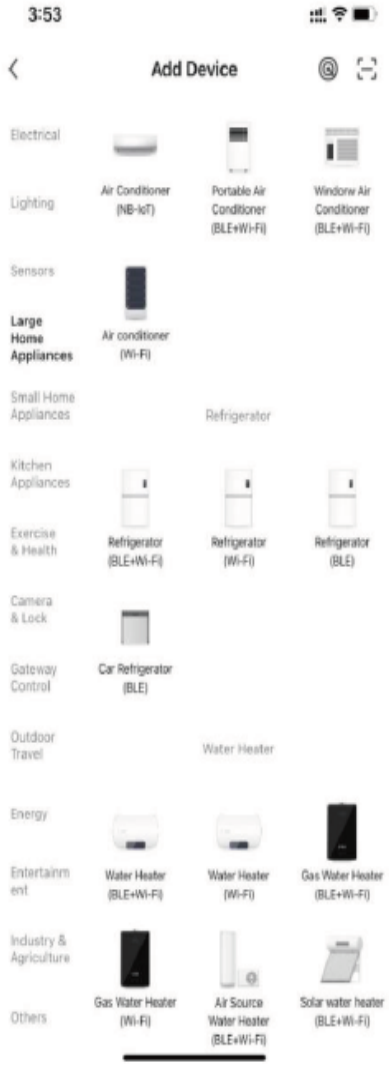


2. Cellphone/tablet needs to connect to WI-FI (2.4GHz) and also opens the Bluetooth.
3. Use a cable to connect the controller to the water heater. Power the heater, and the WI-FI signs on the controller will start blinking.

4. Open the app and click "Add Device" or the "+" at the upright corner.



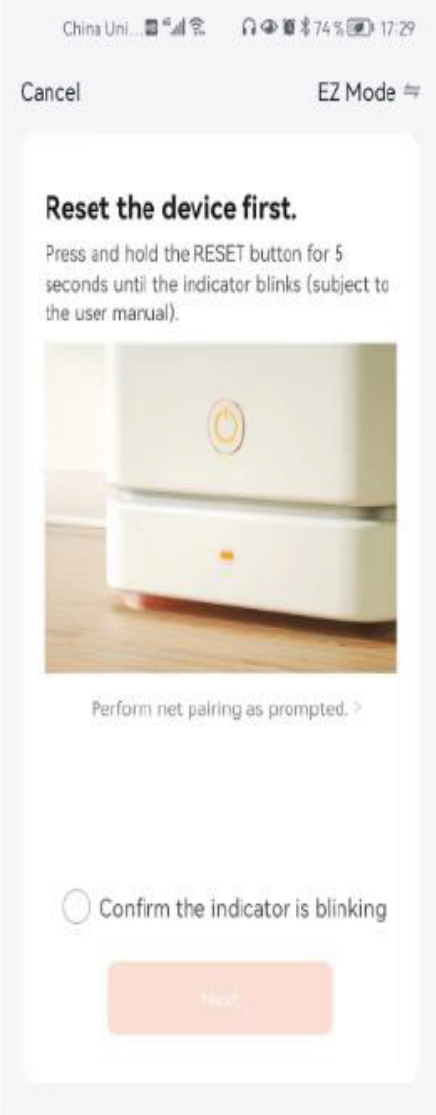
5. Find "Large Home Appliances" and click "Gas Water Heater (WI-FI)".



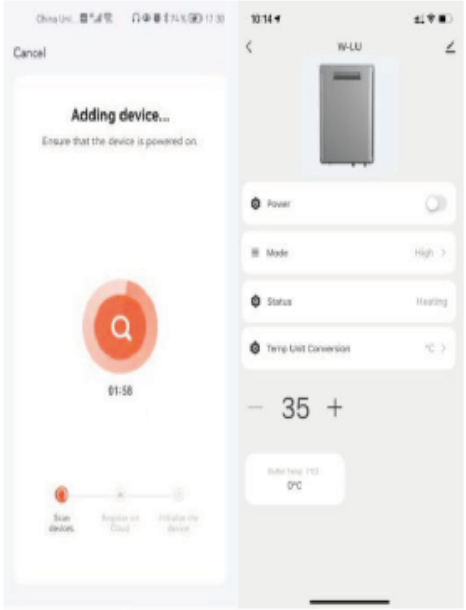
6. Sign in your WI-FI



7. Ensure the sign is blinking



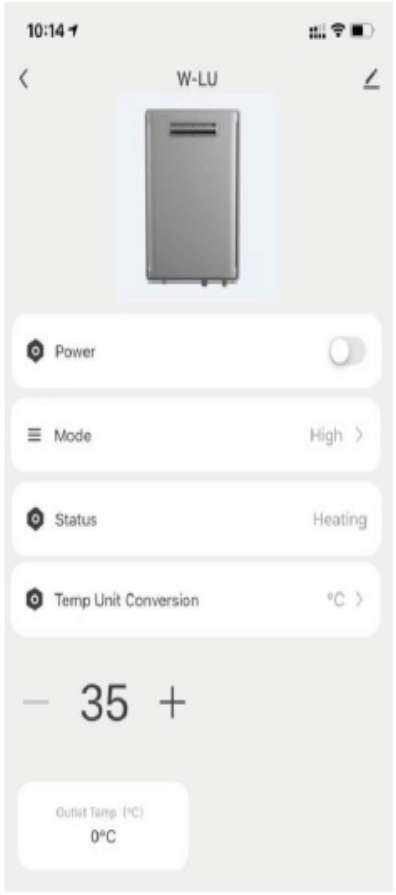
8. Connect and then finish and the WI-FI sign on the controller will remain light constantly.



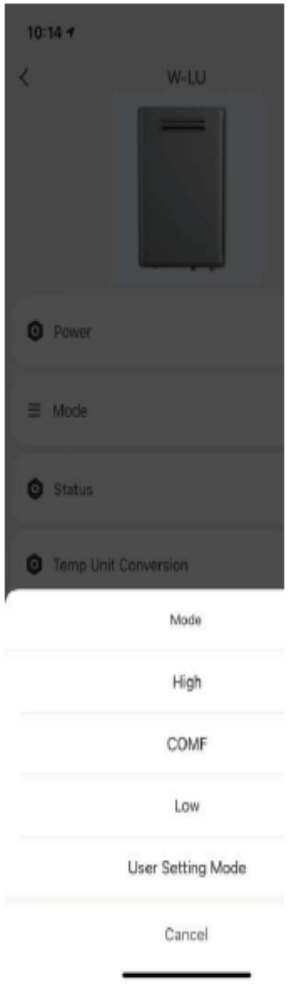
Remark:

1.The turn-off of the WI-FI sign shows error in the connecting.
2.To restart or reset the connection, press the button for around 5s till the WI-FI sign starts blinking again.

FUNCTION OF THE APP



1. Power: On/Off switch
2. Mode:
High: setting temperature at 50℃
COMF: setting temperature at 45℃
Low: setting temperature at 37℃
User Setting Mode: Setting temperature by needs



1. Status: Heating and not
2. Temp Unit Conversion: Switch between℃ and ℉
3. "-35+ ": for setting temperature
4. Outlet Temp: Actual temperature of water

30L Fan forced geyser notes:

ATLAS™

WATER GEYSER INSTRUCTION MANUAL

Molde :12-ECL,16-ECL,20-ECL



⚠ WARING

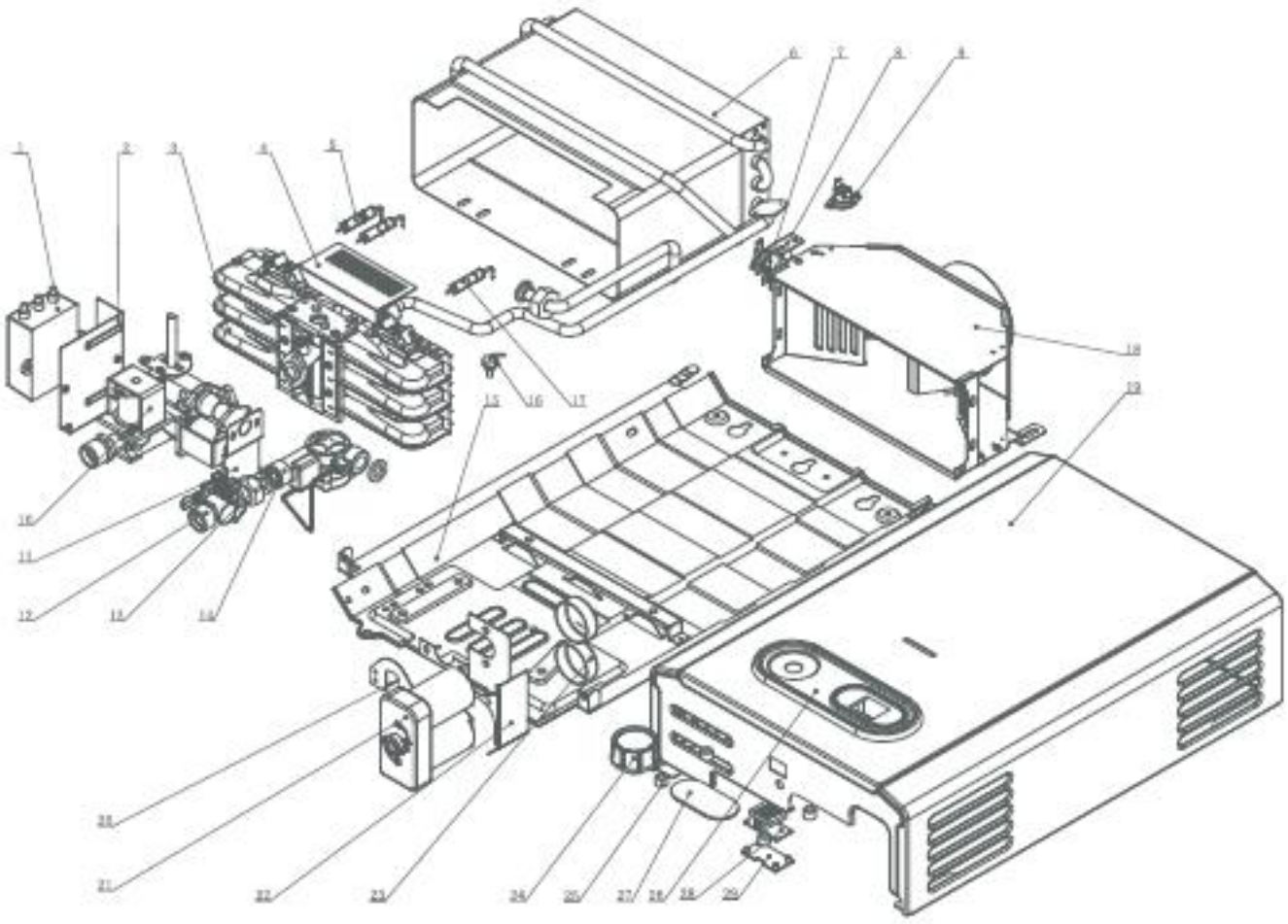
To be installed by approved LPG and NG gas installers only.

Low water pressure startup models:
When water supply pressure is lower to 0.025Mpa, the unit can also startup, suitable to the user living in high flooor or lower water supply pressure.

Additonal notes for south africa for compliance to SANS 1539-2012.Please read this instruction manual carefully andmake sure that you understand the operation of this appliance prior to attempting to use it.Pleas retain these instructions for future reference.This appliance may only be installed by a qualifie gas practitioner,with a valid saqcc certification number and identificaiton card.The gas practitioner,by low,must commission this appliance for you or your representative,and must clearly explian every aspect of using this appliance and the installation,before you sigin the cerfitcate of compliance.This C.O.C(certificate of compliance) must be presented to your insurance company.keep a copy in a safe place as this your warranty.You will need to produce this certifcate for any warranty claims. If you are unable to produce your C.O.C.your warranty will be null and void.

ANNEX F.

➢ Identification of parts.



1. Ignition controller
2. Pulse support
3. Burner
4. Heat shield
5. Induction needle
6. Heat exchanger
7. Thermostat
8. Fixed plate
9. Thermostat right angle
10. Gas valve
11. Bracket
12. Inlet valve
13. Rectangular sealing ring
14. Water flow on-off valve
15. Bottom shell
16. Temperature sensor(water outlet)
17. Ignition pin
18. Hood
19. Front shell
20. Effluent card
21. Battery case
22. Bracket
23. Silicone sleeve
24. Water vapor regulating knob
25. Plastic pad 20t
26. Decorative board
27. Patch
28. Display
29. Back cover

ANNEX G.

➢ Maintenance and repair guide to common malfunctions.

Symptom	Reason	Methods
Start Water Valve on Fire	1. Haven't turned on the general gas valve Or gas tank is empty. 2. Some air in the gas tube. 3. Inside water frozen. 4. Low water pressure. 5. Safety device started. 6. Wrong battery direction or low battery. 7. There is something wrong with the water heater.	1.Turn on the general gas vavle or change gas tank. 2.Continuously turn on the water valve until there is fire (Attention turn off the water valve the turn on again in five seconds.) 3.Wait until the ice melted. 4.Switch water knob to "high",if no fire. try to raise water pressure and ask professional persons to help. 5.Please refer to : How to deal with safety-protection. 6.Fix or change the batter. 7.Ask the professional persons for help.
Flame out when using	1.The general gas valve is not turned on thoroughly or gas tank is empty. 2.The gas pressure is too low. 3.Site-installation is effective. 4.Heat exchanger is blocked up. 5.There is something wrong with the water heater.	1.Turn on the general gas vavle thoroughly or change gas tank. 2.Raise the general gas valve(Better ask professional person for help) 3.Please refer to: How to deal with safety-protection. 4. Ask professional person for help.
Fire on suddenly	1.The general gas valve isn't turned on thoroughly. 2.Gas pressure is to low.	1.Turn on the general gas valve thoroughly. 2.Raise gas pressure and replace the gas pressure valve.
Adjusting to "high" place but temperature is not high	1.Turn on the general gas valve thoroughly. 2.Raise gas pressure and replace the gas pressure valve.	1.Turn on the general gas valve thoroughly. 2.Raise gas pressure and replace the gas pressure valve. 3.Ask professional person for help.
Adjusting "Low" Its too hot	1.Gas pressure is too high. 2.Something wrong with water adjustment valve.	1.Reduce gas pressure or place the gas pressure valve. 2.Ask the proessional person for help.
Fire goes out in "low" Place	Low water pressure	Try to raise the water pressure
Turn off the water valve but fire is still on	Something wrong with water adjustment valve	Ask professional person for help
Flame is unusaual and have a smell	1.Burner is blocked up 2.Heat exchagner is bloacked up	Ask professional person for help
Unusual sound when burning	1.Water pressure is too high 2.Burner is blocked up	Ask professional person for help

LOW PRESSURE GEYSER NOTES

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WATER GEYSER INSTRUCTION MANUAL

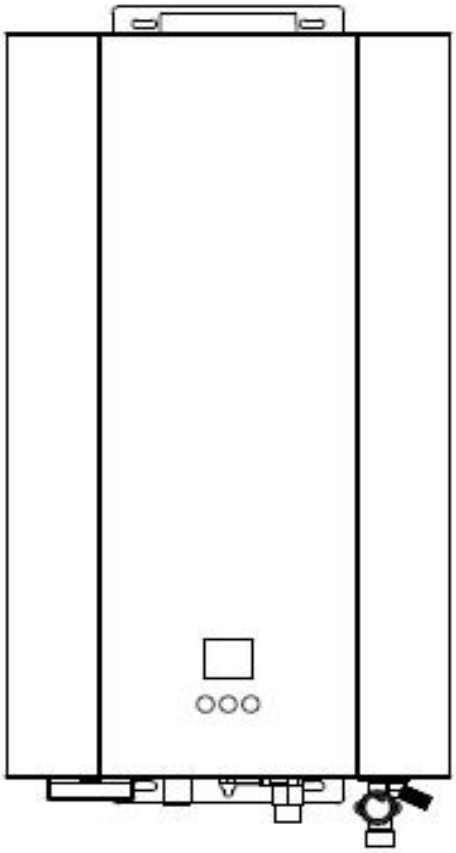
EC24-UWG

WARNING
TO BE INSTALLED BY APPROVED NG/ LPG GAS INSTALLER ONLY

CAUTION

1. The appliance can be turned off at any time when touching the On/Off button. But it can be restart or turned on ONLY before letting in the water. During operation, please touch the On/Off button to turn on the appliance, and then let in the water to ignite.
2. The touch control panel will be LOCKED after 10 seconds without any operation, and can be UNLOCKED by long press for 3 seconds by any button.
3. The water heater must be installed in a well ventilated area.

The gas water heater must only be installed in outside location



Additional notes for south africa for compliance to sans.1539-2012.

Please read this instruction manual carefully and make sure that you understand the operation of this appliance prior to attempting to use it.
Please retain these instructions for future reference.

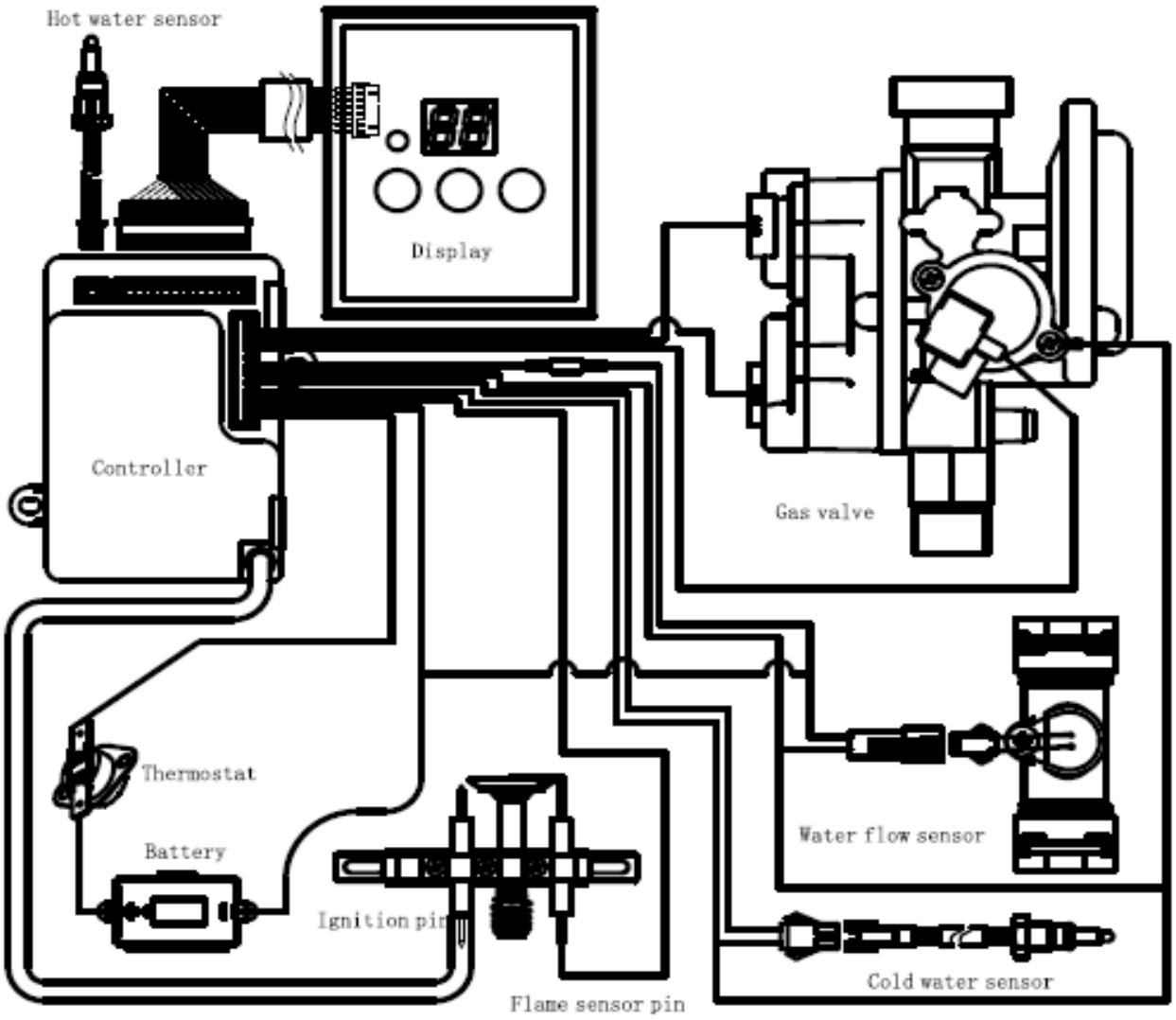
This appliance may only be installed by a qualified gas practitioner, with a valid saqcc certification number and identification card.
The gas practitioner, by law, must commission this appliance for you or your representative, and must clearly explain every aspect of using this appliance and the installation, before you sign the certificate of compliance.
This c.o.c. (certificate of compliance) must be presented to your insurance company. Keep a copy in a safe place as this is your warranty. You will need to produce this certificate for any warranty claims. If you are unable to produce your c.o.c., your warranty will be null and void.

Trouble shooting

Troubles Shooting / Case		Flameout during usage	Ignition failed after opening the water heater	Deflagration symptom during ignition	Yellow flame with smog	Abnormal smell	Abnormal sound during ignition	Water not hot enough when turned to High Temperature' position	Water still too hot when at 'Low Temperature'position	Flameout when at Low' Temperature'position	Flame cant be extinguished after closed the water heater	Solutions
Main gas valve not opened			●									Completely open the gas valve, or replace the gas tank with a new one
Main gas valve half opened		●		●				●				Fully open the gas valve
Air inside the gas pipe			●									Continuously open and close the hot water valve until the flame is ignited
Gas pressure is not suitable	High			●			●					Ask maintenance personnel to check the water supply valve and water pressure adjusting valve
	Low	●						●				
Main cold water supply not opened			●									Fully open the main water supply valve
Freezing			●									The water heater can be used only after the ice is melted
Cold water pressure not sufficient		●	●							●		Ask maintenance personnel to check the water pressure
Improper operation for water temperature adjusting								●	●			Set your preferred temperature on the control panel
Lack of fresh air					●							Ventilate the room immediately
Safety device is working		●	●									Re-start the water heater. If still doesn't work, contact the installer.
Malfunction of electric controlled system		●	●									Contact the installer.
Combustor clogged					●	●	●					Same as above
Heat exchanger clogged		●			●	●						Same as above
Malfunction of water controlled device		●	●					●	●		●	Check intensively
Positional changer of ignition distance				●								Adjust the ignition distance
Cold water supply pressure is too high								●				Adjust the cold water supply valve

Error Code	Possible fault	Solution	Remark
E0	Flameout accident occurs after 1 minute operation, and the flame sensor couldn't detect the flame signal within 7s at re-ignition process	**1. Check whether the gas supply is ok;** 2. Check whether the flame sensor is damaged or the connection wire is pulled off; 3. change the diaphragm valve or controller	
E1	No flame signal be detected within 60s (pilot) No flame signal be detected within 10s (main burner)	**1. Check whether the gas supply is ok;** 2. Check whether the flame sensor is damaged or the connection wire is pulled off; 3. Check whether the pilot wire is connected correctly. 4. Check whether the pilot gas supply pipe is twisted (block) or cracked (leakage); 5. change the diaphragm valve or controller	
E2	20 min shut off	normal operation, close and re-open the water valve, and it will back to normal	
E3	Technican setting mode	Turn off the geyser, reload the battery than turn on the geyser again	
E4	Flame signal is detected before the water valve is open	change the diaphragm valve	
E5	Open circuit of output water temp. sensor	1. Check whether the circuit of output water temp. sensor is opened or broken 2. change the sensor	
E6	Short circuit of the output water temp. sensor or temp. of hot water exceed 85 C	1. Check whether the gas type, gas pressure is the same as specified in the label; 2. water pressure is too low suddenly; 3. Change the output water temp. sensor or broken 4. Change the diaphragm valve or controller	
E7	the gas flow is unstable, and distinguish 5 times continuously	1. It is normal if it is the first time operation or the appliance has been leave unused for a long time, please try several times. 2. Check whether the gas type & pressure is the same as specified in the label; 3. Change the diaphragm valve or controller	
E8	(water flow capacity is larger than 3L/min) open circuit of the over heat sensor (or flue block sensor)	1. Check whether the gas type, gas pressure is the same as specified in the label; 2. water pressure is too low suddenly; 3. Check whether the flu be blocked; 4 change the diaphragm or controller 5.Replace the D-Cell battery	
EA	Open circuit of input water temp. sensor	Check whether the wire of input water temp. sensor is pulled off; 2 change the input water temp. sensor	
EB	one of the 2 CPUs of the controller damaged, or relative circuit fault	change the controller or looms	
EE	Abnormal performance of the command, logic, and arithmetic of the controller	change the controller	
PA		the battery power is not enough (1.15+0.05V) 2xD-Cell	

Electric Wire



AFTER-SALES SERVICE

If abnormal situation occurs and your water heater does not operated normally, please check item by item according to the section "Trouble shooting" & "Error code". If there is any can not handle or you do not understand, please do not handle it yourself, please contact our appointed service any time you cannot handle installer. You can also contact the customer service department of our company

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Fax: 011 452 7911

12L Constant temp geyser notes:

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WATER GEYSER INSTRUCTION MANUAL.

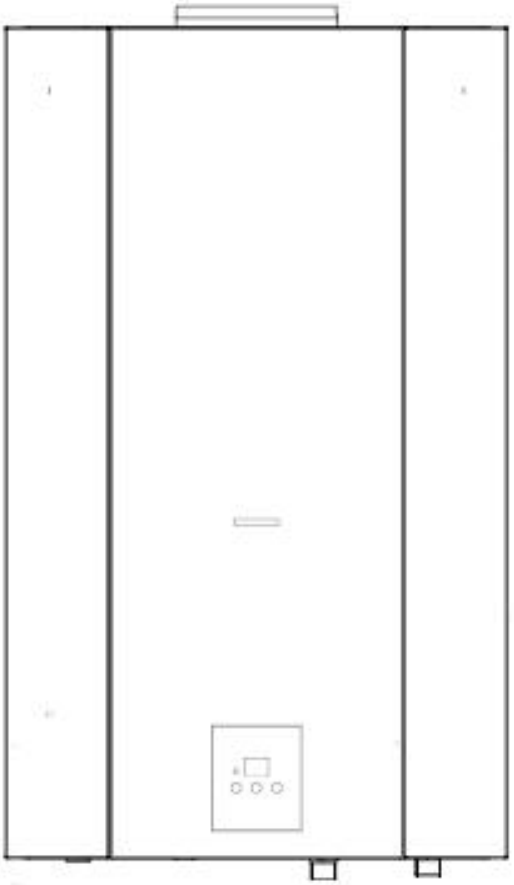
EC32-DG

WARNING
TO BE INSTALLED BY APPROVED LPG GAS INSTALLER ONLY

CAUTION

1. The appliance can be turned off at any time when touching the On/Off button. But it can be restart or turned on ONLY before letting in the water. During operation, please touch the On/Off button to turn on the appliance, and then let in the water to ignite.
2. The touch control panel will be LOCKED after 10 seconds without any operation, and can be UNLOCKED by long press for 3 seconds by any button.
3. The water heater must be installed in a well ventilated area.

The gas water heater must only be installed in outside location

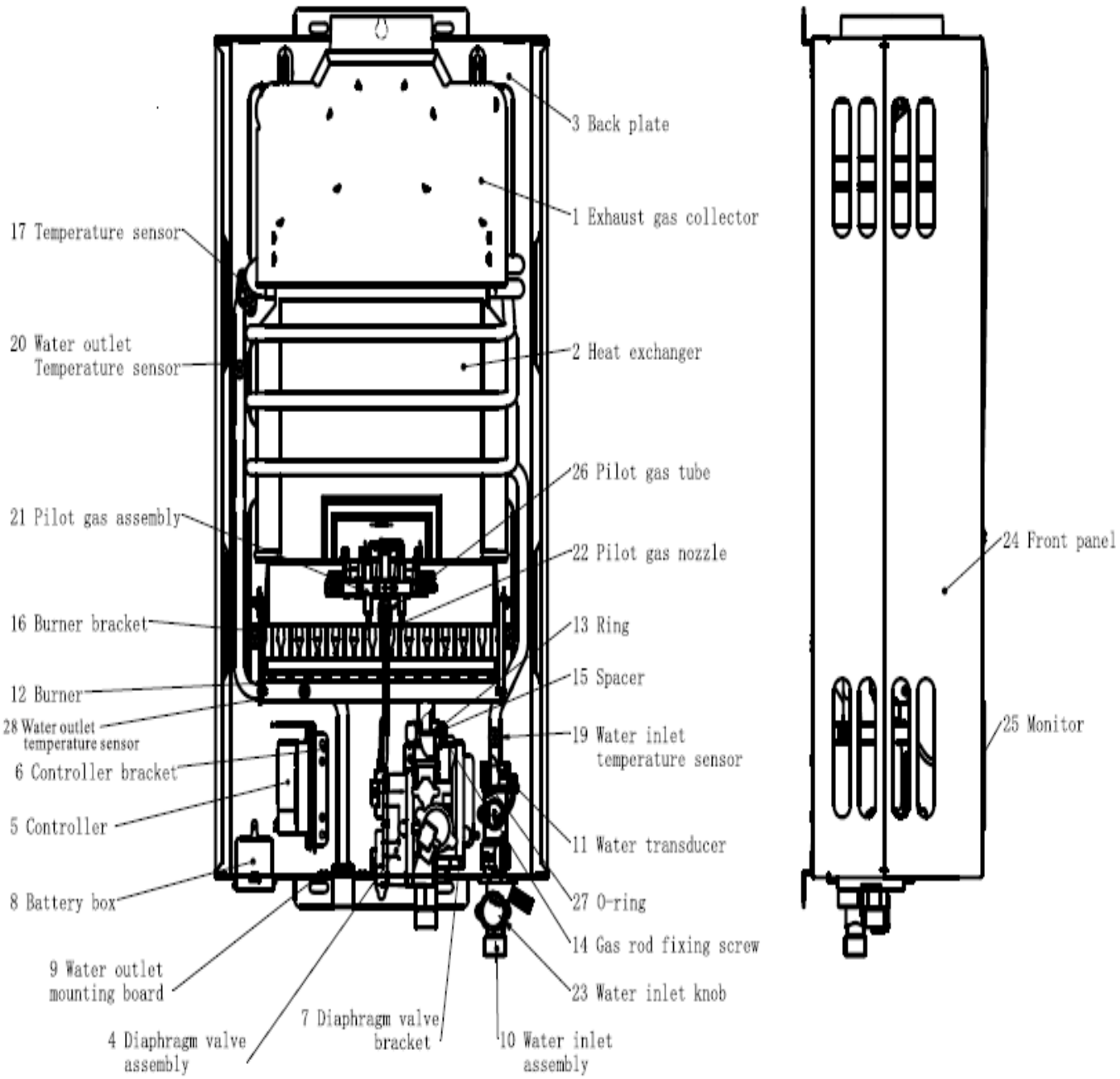


Additional notes for south africa for compliance to sans.1539-2012.

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Components List



Trouble shooting

Troubles Shooting / Case	Flameout during usage	Ignition failed after opening the water heater	Deflagration symptom during ignition	Yellow flame with smog	Abnormal smell	Abnormal sound during ignition	Water not hot enough when turned to High Temperature' position	Water still too hot when at 'Low Temperature'position	Flameout when at 'Low' Temperature'position	Flame cant be extinguished after closed the water heater	Solutions
Main gas valve not opened		●									Completely open the gas valve, or replace the gas tank with a new one
Main gas valve half opened	●		●				●				Fully open the gas valve
Air inside the gas pipe		●									Continuously open and close the hot water valve until the flame is ignited
Gas pressure is not suitable — High			●			●					Ask maintenance personnel to check the water supply valve and water pressure adjusting valve
Gas pressure is not suitable — Low	●						●				
Main cold water supply not opened		●									Fully open the main water supply valve
Freezing		●									The water heater can be used only after the ice is melted
Cold water pressure not sufficient	●	●							●		Ask maintenance personnel to check the water pressure
Improper operation for water temperature adjusting							●	●			Set your preferred temperature on the control panel
Lack of fresh air				●							Ventilate the room immediately
Safety device is working	●	●									Re-start the water heater. If still doesn' t work, contact the installer.
Malfunction of electric controlled system	●	●									Contact the installer.
Combustor clogged				●	●	●					Same as above
Heat exchanger clogged	●			●	●						Same as above
Malfunction of water controlled device	●	●					●	●		●	Check intensively
Positional changer of ignition distance			●								Adjust the ignition distance
Cold water supply pressure is too high							●				Adjust the cold water supply valve

ERROR CODE

The controller of the water heater with self-check function, following error code will help the user and technical to find out the faults and solution quickly.

Error Code	Possible fault	Solution	Remark
E0	Flameout accident occurs after 1 minute operation, and the flame sensor couldn't detect the flame signal within 7s at re-ignition process	**1. Check whether the gas supply is ok;** 2. Check whether the flame sensor is damaged or the connection wire is pulled off; 3. change the diaphragm valve or controller	
E1	No flame signal be detected within 60s (pilot) No flame signal be detected within 10s (main burner)	**1. Check whether the gas supply is ok;** 2. Check whether the flame sensor is damaged or the connection wire is pulled off; 3. Check whether the pilot wire is connected correctly. 4. Check whether the pilot gas supply pipe is twisted (block) or cracked (leakage); 5. change the diaphragm valve or controller	
E2	20 min shut off	normal operation, close and re-open the water valve, and it will back to normal	
E3	Technican setting mode	Turn off the geyser, reload the battery than turn on the geyser again	
E4	Flame signal is detected before the water valve is open	change the diaphragm valve	
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E6	Short circuit of the output water temp. sensor or temp. of hot water exceed 85 C	1. Check whether the gas type, gas pressure is the same as specified in the label; 2. water pressure is too low suddenly; 3. Change the output water temp. sensor or broken 4. Change the diaphragm valve or controller	
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EA	Open circuit of input water temp. sensor	Check whether the wire of input water temp. sensor is pulled off; 2 change the input water temp. sensor	
EB	one of the 2 CPUs of the controller damaged, or relative circuit fault	change the controller or looms	
EE	Abnormal performance of the command, logic, and arithmetic of the controller	change the controller	
PA		the battery power is not enough (1.15+0.05V) 1xD-Cell	

HOW TO RE-PROGRAM 32ECL-DG

1. Press the on/off button to turn the geyser on
2. Immediately after turning the geyser on, hold the on/off button for 5 seconds or until the geyser starts flashing the LL date.
3. The correct setting is LL29. Adjust to LL29 by pressing the up/down buttons until you reach LL29 value.
4. Remove and put the battery back, open the hot water tap.
5. Confirm the LL value by turning the geyser on with the on/off button then hold for 5 seconds.

16L CONSTANT TEMP NOTES

ATLAS™

WATER GEYSER INSTRUCTION MANUAL.



MODEL.: 24-EC

WARNING
TO BE INSTALLED BY APPROVED LPG GAS INSTALLER ONLY

A5规格 物料编码HST05ZA11004

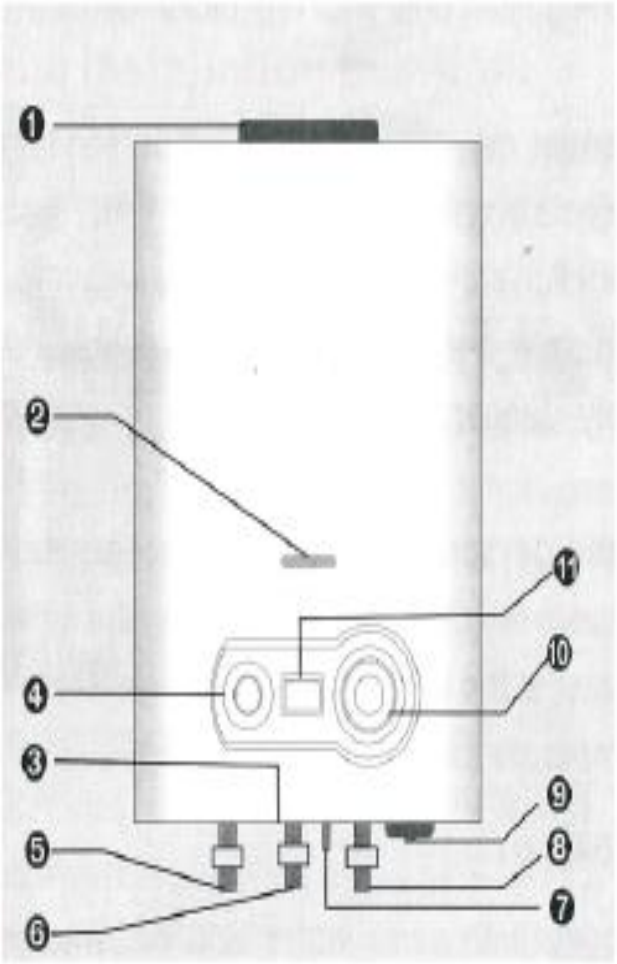
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The gas practitioner, by law, must commission this appliance for you or your representative, and must clearly explain every aspect of using this appliance and the installation, before you sign the certificate of compliance. This c.o.c. (certificate of compliance) must be presented to your insurance company. Keep a copy in a safe place as this is your warranty. You will need to produce this certificate for any warranty claims. If you are unable to produce your c.o.c., your warranty will be null and void.

ANNEX A.

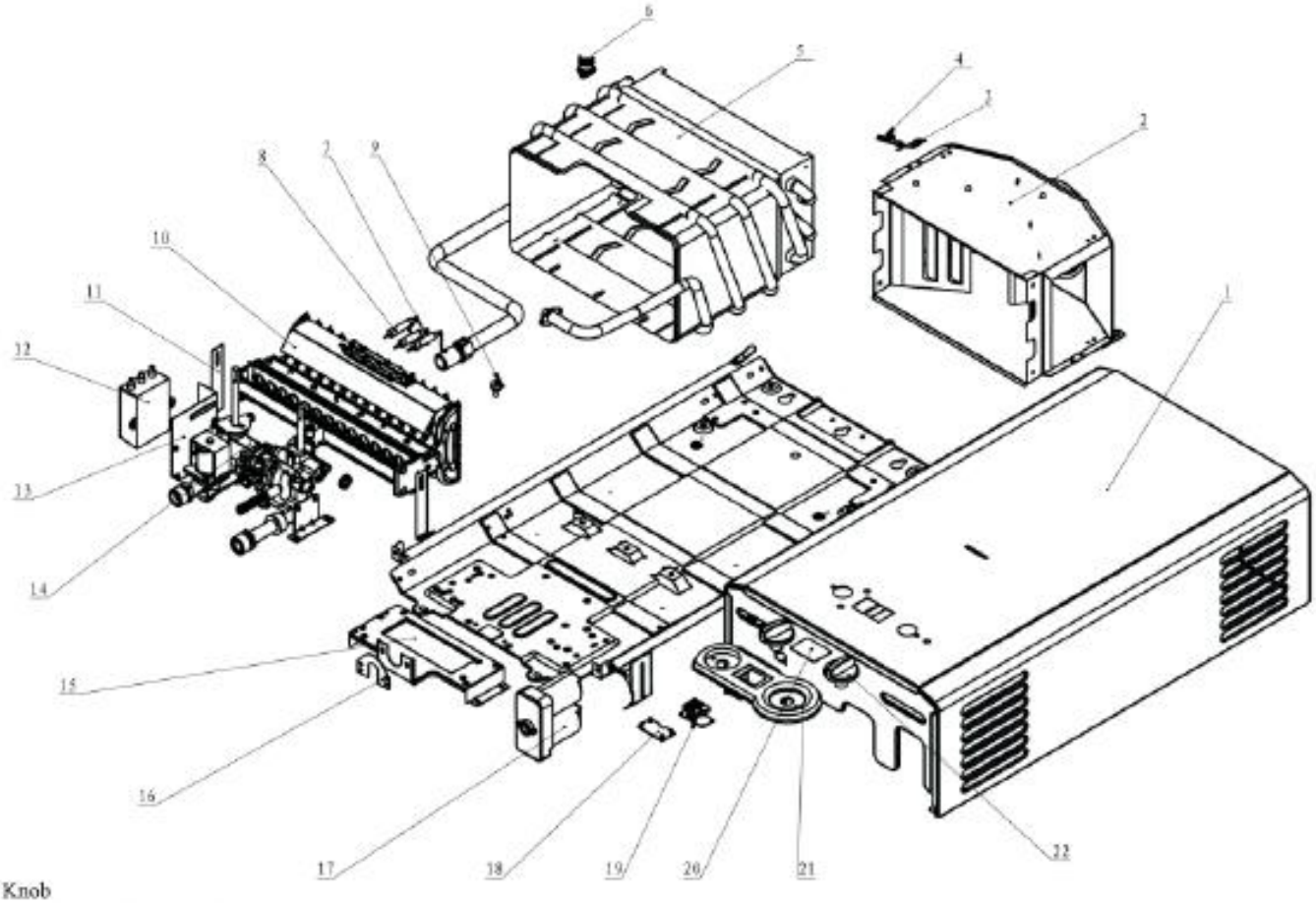
Features and functional part description.



1.Flue pipe joint
2.Flame observation window
3.Battery indicator
4.Flame adjustment knob
5.Gas inlet
6.Water outlet
7.Water discharge valve
8.Water inlet
9.Battery box
10.Water adjustment knob
11. White LED display

ANNEX F.

➢ Identification of parts.

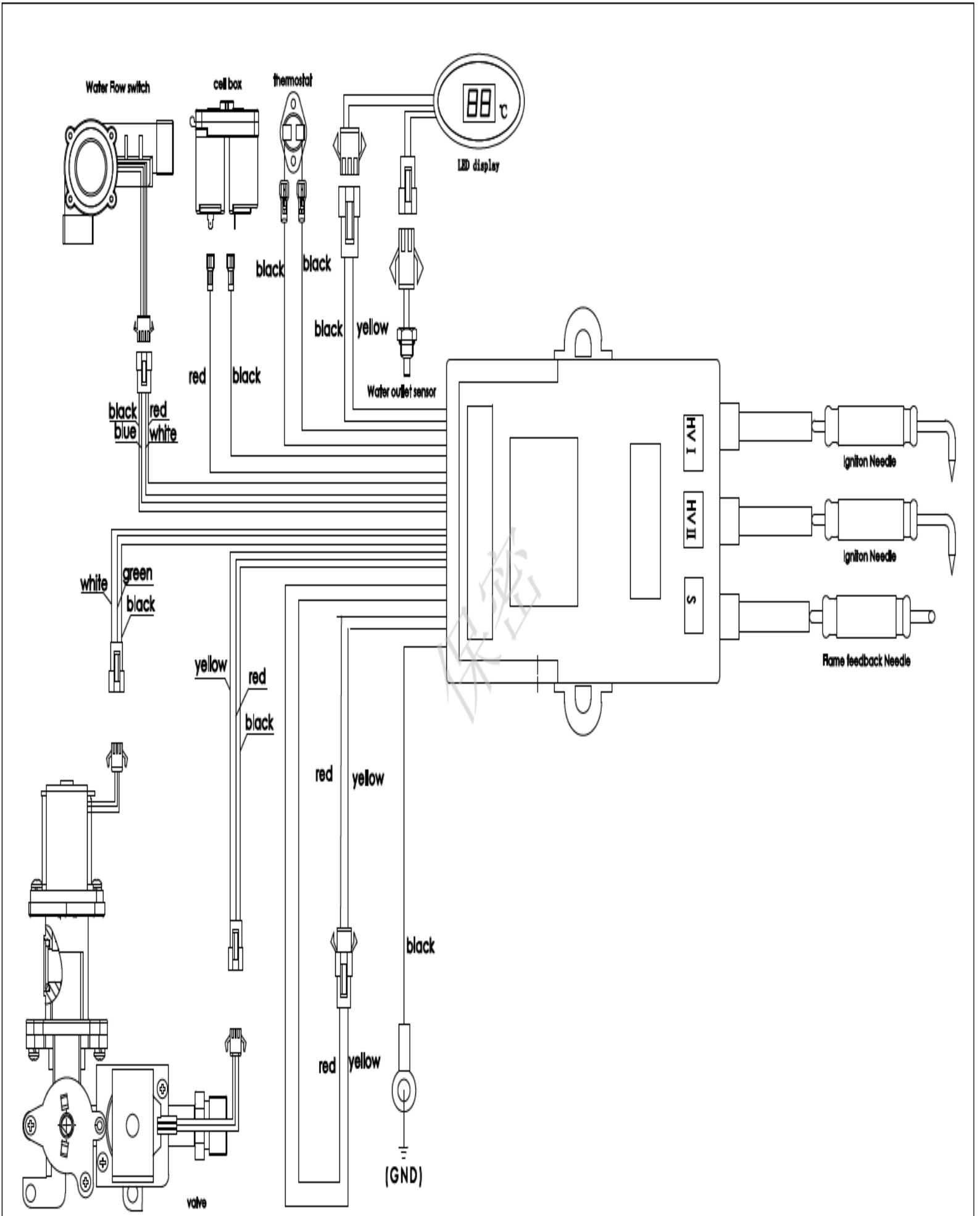


22 Knob
21 Decoration plastic panel
20 Paster above the decoration plastic panel
19 Display
18 Display panel
17 Battery box
16 Water outlet connector support
15 Suppor of gas&water valve
14 Gas&water valve
13 Support of control unit
12 Control unit
11 Support of burner
10 Burner
9 Outlet water temperature sensor
8 Ignition pin
7 Sensor pin
6 Temperature controller
5 Heat exchanger
4 Flue sensor
3 Flue sensor clamp
2 Chimney
1 Top panel

ANNEX G.

➢ Maintenance and repair guide to common malfunctions.

Symptom	reason	Methods
Start Water valve no Fire	1.Havent turned on the general gas valve Or gas tank is empty 2.Some air in the gas tube 3.Inside water frozen 4.Low water pressure 5. Safety device started 6. Wrong battery direction or low battery 7.there is something wrong with the water heater.	1.turn on the general gas valve or change gas tank 2.Continuously turn on the water valve until there is fire (Attention turn off the water valve then turn on again in five seconds.) 3.Wait until the ice melted 4.Switch water knob to "high", if no fire, try to raise water pressure and ask professional persons to help 5.Please refer to : How to deal with safety-protection. 6.Fix or change the battery. 7.Ask the professional persons for help.
Flame out when using	1.The general gas valve is not turned on thoroughly or gas tank is empty. 2.The gas pressure is too low 3.sate-installation is effective 4.Heat exchanger is blocked up. 5.theres something wrong with the water healer	1.Turn on the general gas valve Thoroughly or change gas tank. 2.raise the general gas valve(better ask professional persons for help) 3.Please refer to: How to deal with safety-protection 4.Ask profession person for help. 5.Ask professional person for help.
Fire on suddenly	1.The general gas valve isn't turned on thoroughly 2.Gas pressure is to low	1.Turn on the general gas valve thoroughly. 2.Raise gas pressure and replace the gas pressure valve
Adjusting to "high" place but temperature is not high	1. The general gas valve isn't turned on thoroughly 2. Gas pressure is too low 3. Something wrong with water adjustment valve	1. Turn on the general gas valve thoroughly 2. Raise gas pressure and replace the gas pressure valve 3.Ask professional person for help
Adjusting "Low" Its too hot	1.Gas pressure is too high 2.something wrong with water adjustment valve	1.Reduce gas pressure or place the gas pressure valve. 2.Ask the professional person for help.
Fire goes out in "low" Place	Low water pressure	Try to raise the water pressure
Turn off the water valve but fire is still on	something wrong with water adjustment valve	Ask professional person for help
Flame is unusual and have a smell	1.Burner is blocked up 2.Heat exchanger is blocked up	Ask professional person for help
Unusual sound when burning	1.Water pressure is too high 2.Burner is blocked up	Ask professional person for help


Water Flow switch
cell box
thermostat
LED display
black
black
black
yellow
red
black
Water outlet sensor
black
blue
red
white
HV I
HV II
S
Igniton Needle
Igniton Needle
Flame feedback Needle
white
green
black
yellow
red
black
red
yellow
black
red
yellow
(GND)
valve

DIAPHRAGM GEYSER NOTES

Spares you should always have on hand.

EC (diaphragm geyser)

1. MICROSWITCH
2. DIAPHRAGM (50,55,72mm)
3. SOLENOID
4. IMPULSE BOX EC
5. OUTLET TEMP SENSOR
6. PLUNGER
7. PLASTIC DISC
8. CIR CLIP
9. FLU PROBE
10. FLU SENSOR (according to your geyser)
11. BATTERY BOX
12. DURACELL D CELL BATTERIES
13. TEMP SENSOR 85

ECL (LOW PRESSURE GEYSER SPARES)

1. SOLENOID
2. WATERFLOW SENSOR
3. BATTERY BOX
4. IMPULSE BOX
5. TEMP SENSOR
6. OUTLET TEMP SENSOR ECL
7. DURACELL D CELL BATTERIES

FAN FORCED GEYSER

1. WATER FLOW SENSOR
2. OVERHEAT PROTECTION SENSOR (OVER TEMP PROTECTION SENSOR)
3. INLET TEMP SENSOR
4. OUTLET TEMP SENSOR
5. MELTING WIRE

DG (CONSTANT TEMPERATURE GEYSER)

1. WATERFLOW SENSOR DG
2. INLET TEMP SENSOR
3. OUTLET TEMP SENSOR
4. BATTERY BOX
5. DISPLAY
6. PILOT JET ASSEMBLY
7. WIRING HARNESS
8. LOOM (DISPLAY CABLE)