DEWHOT

20L Fan Forced
Room Sealed Gas Geyser

Type C - RS20DH

Install indoors with a flue

Read these instructions carefully before operating the gas geyser and familiarize yourself with the appliance before connecting it to the gas cylinder. **Keep these instructions for future reference.**

This appliance is manufactured to operate on LPG only. Do not tamper or modify the appliance.

Important

IF YOU SMELL GAS

1. Turn off the gas supply at the bottle
2. Extinguish all naked flames
3. Do not operate any electrical appliances
4. Ventilate the area
5. Check for leaks as described in this manual
6. If gas smell persists, contact your dealer or gas supplier immediately
7. Do not modify the appliance

BURN-BACK

In the event of a burn-back, where the flame burns back to the jet, immediately turn the gas supply off at the gas cylinder. After ensuring the flame is extinguished, wait for I minute and then reignite the appliance as per normal. Should the appliance burn back again, close the gas cylinder and call a registered LPG installer. Do not use the appliance again until the installer has confirmed that it is safe to do so.

GAS-PRESSURE REGULATOR

This appliance requires an operating pressure of 2,8 kpa. Only install a LPG low pressure regulator that complies with the SANS 1237 requirements.

GUARANTEE

After installation, please register your product on the Dewhot website (**www.gasgeysers.co.za/product-registration**) You will need your invoice and Certificate of Compliance (COC) to complete the registration.

Only a registered gas installer can install your gas geyser and must comply to SANS 10087-1

User

This appliance may only be installed by a registered LPG installer.

Registered installers are issued with a card that displays their registration number. Insist on seeing this card and make a note of their registration number.

When they have finished their installation make sure the installer performs an operational and safety briefing.

Before you sign off the installation, make sure you also receive your COC

Installer

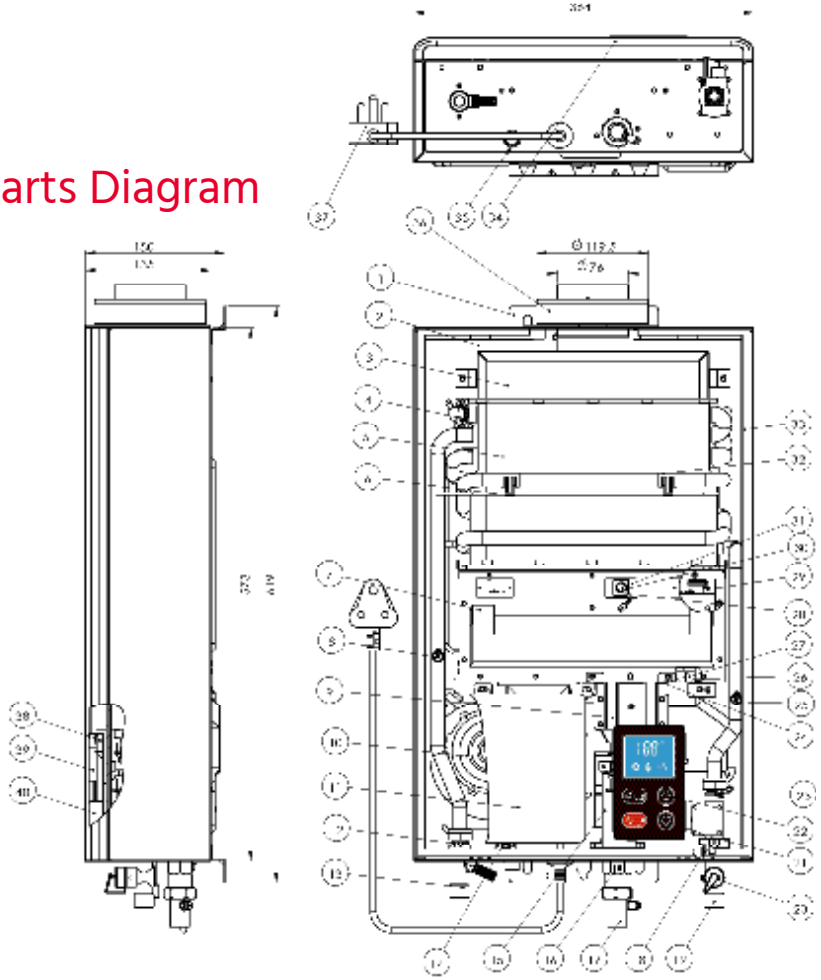
This appliance may only be installed by a LPG Installer registered with the South African Qualification and Certification Committee (SAQCC). The appliance must be installed in accordance with the requirements of SANS 10087-I for use with LPG and or any fire department regulations and/or local bylaws applicable to the area.

If in doubt, check with the relevant authority before continuing with the installation. Once an installation is complete you are required to brief, in full, the operational and safety functions of the appliance.

Technical parameters

Description	Room Sealed
Model no	RS20DH
Model	Type C
Gas type	LPG
Max gas pressure	2,8kpa
Hot water output	20L/min
Water pressure	0.25 - 5 BAR
Rated input	40kw
Water Flow	2,5 - 20lt/min
Rated voltage	240V/60Hz
Rated Electrical Power	45W
IP Rate	IPx4D
Max gas consumption	2.9 kg/h
Appliance size	575 (795 with flue) x 365 x 150 mm
Unit weight	17.2 kg

Parts Diagram



1. Hanging panel
2. Back plate
3. Exhaust gas collector
4. Temperature sensor
5. Heat exchanger
6. Thermal fuse
7. Combustion burner
8. Water outlet temperature sensor
9. Gas distribution pipe
10. Fan
11. Pulse generator
12. Washer
13. Water outlet
14. Controller box
15. Proportional valve
16. Gas inlet
17. Gas inlet adapter
18. Washer/O-ring
19. Water inlet
20. Water flow valve
21. Water flow sensor
22. Control panel
23. Rectangle sealing washer
24. Distributor sealing washer
25. Water inlet temperature sensor
26. Distributor sealing plate
27. Ignition line sealing washer
28. Sensor pin
29. Ignition pin
30. Sensor pin pressing plate
31. Sensor pin sealing washer
32. Pipe clamp
33. Panel sealing ring
34. Face panel
35. Aviation plug
36. Exhaust pipe
37. Electric Plug
38. Plug top
39. Temperature display
40. Display protection box

Functions & Features

WATER FLOW SENSOR
This appliance has a water flow sensor that will immediately ignite the burner when detecting water flow.

FAN ASSISTED COMBUSTION
The motor and fan force oxygen into the appliance to fuel the flame, maximising efficiency.

LOW WATER PRESSURE START UP
The appliance will activate from a water flow of 3lt/min. This indicates that it is suitable for low water pressure applications.

AUTOMATIC GAS ADJUSTMENT
The appliance will automatically adjust its gas usage depending on the water usage, using less gas when you use less water, making the appliance more efficient.

DRY COMBUSTION PROTECTION
In the event of dry combustion (when the gas burner comes on with out water flow), the appliance will automatically shut down

OVER PRESSURISATION PROTECTION
The appliance will automatically protect itself by releasing pressure if the water supply is over 10 Bar (this can be manually set).

FLAME OUT SENSOR
This is designed to automatically cut off the gas supply should the flame/ burner unexpectedly extinguish or the sensor no longer detects a flame.

DIGITAL CONTROL PANEL
Simplicity of adjusting the temperature of the water by 1°C increments at the touch of a button.

ROOM SEALED APPLIANCE
This appliance does not use any oxygen from the room around it, making it much safer to use indoors, in high rise buildings and areas where the appliance cannot be placed outside. This unit comes with three preset modes :
SH = shower - set at 45°C,
SI = sink - set at 50°C
BH = bath - set at 55°C

LONGER LASTING
Due to the seal around the entire cover of the geyser it gets far less exposed to harsh elements such as wind, rain and sea air. It is better protected and thus longer lasting.

THERMAL FUSE
The thermal fuse wraps around the heat exchanger and heats up in subzero temperatures preventing the water from freezing inside the pipes, causing them to burst.

Safety instructions

PROPER VENTILATION

To avoid the risk of fire, explosion, or asphyxiation never operate the gas geyser unless it is installed properly and has adequate air supply. Make sure the flue terminal is installed properly for the initial start-up; and check it annually thereafter.

FLAMMABLE MATERIALS

Flammable materials and liquids (adhesives, solvents, paint thinners etc.) are extremely dangerous.
DO NOT handle, use or store these combustible materials near to the gas geyser.

WATER TEMPERATURE SETTING

Safety and energy savings need to be considered when setting the water temperature . Water temperatures above 52°C can cause severe burns.
Refer to page 16.

1. Households with small children, disabled or elderly people need to set the temperature to 49°C or lower
2. Maximum water temperature occurs when the burner is on. To see the water temperature look at the front control panel of the gas geyser.
3. The Factory default water setting is 41°C and this setting can be adjusted on the control panel
4. The gas geyser has a heating range between 37°C and 70°C.

TIME/TEMPERATURE EXPOSURE RESULTING IN BURNS

Hot water can create severe burns, we should rarely exceed the temperatures below

49°C	More than 5 minutes
52°C	1.5 to 2 minutes
55°C	+/- 30 seconds
57°C	+/- 10 seconds
60°C	less than 5 seconds
63°C	less than 3 seconds
66°C	+/- 1.5 to 2 seconds
69°C	+/- 1 second

Safety instructions

NATURAL AND LP GAS

Both LP and natural gas are odoured to help detect leaks.

Appliances using LP gas are different from natural gas models. A natural gas geyser can not function safely on LP gas and vice versa.

Do not try to convert the gas geyser from a natural gas to a LP gas appliance. This could damage the appliance, cause injuries or fires. Never connect the gas geyser to a fuel type that is not in accordance with the appliance's data table.

WHEN DETECTING A LEAK ON YOUR INSTALLATION

LP gas is twice as heavy as air and may accumulate in low lying areas and cavities.

Before opening the hot water tap to test your gas geyser, check for gas leaks. Use a soapy solution to check all gas fittings and connections. Bubbles indicate a leak.

1. Do not attempt to find the cause yourself and turn off the gas supply.
2. Do not ignite appliance.
3. Do not touch any electrical switch.
4. Evacuate the house immediately with your family and pets.
5. Leave the doors open for ventilation and contact the gas supplier, registered LP Gas Installer or Fire Department.
6. Stay away from the house (or building) until the service call has been made, the leak is fixed and the space has been declared as safe.
7. Ask the installer to show you where the gas shut-off valve is and how to use it.
8. Turn off the manual shut-off valve if the gas geyser has been subjected to overheating, fire, flood, physical damage or if the gas supply fails to shut off.

Gas detectors are highly recommended and they must be installed in accordance to the detector manufacturer's regulations.

Installation instructions

LOCATION

1. The gas geyser should be installed close to the flue termination to avoid unnecessary elbows and excessive flue length.

2. The gas geyser should be installed with the correct flue.

3. The appliance must be connected to the provided dual flue system that ensures the intake of air and the products of combustion flow to and from the exterior of the building.

4. Venting must be installed as outlined in SANS 1539.

5. Long hot water pipes should be insulated for water and energy efficiency.

6. The gas geyser and water pipes should be protected from freezing temperatures.

7. When installing a gas geyser a minimum of 1 meter is required from any venting system.

IMPORTANT

Do not solder the HOT or COLD water connections. If solder connections are used, solder the fitting to the adapter before fitting the adapter to the water connections. Any heat applied to the water supply fittings will permanently damage the internal components of the gas geyser.

MOUNTING THE GAS GEYSER

Install the appliance in a place that allows for easy access.

At least 8mm concrete plugs and screws should be used to mount the gas geyser to the wall. In the case of dry walling use dry wall anchors.

The gas geyser requires a 13 amp plug point

WATER SUPPLY

This appliance must only be used with the following water supply requirements:

1. Clean, potable water free of corrosive chemicals, sand, dirt, or other contaminants.
2. With inlet water temperatures above 0°C, but not exceeding 49°C
3. Free of lime and scale deposits

DO NOT reverse the hot and cold water connections, this will not allow the gas geyser to function.

WATER SUPPLY CONNECTIONS

Plumbing should be carried out by a qualified plumber. Use approved plumbing materials only. The diameter of the pipe lines should be a minimum of 1/2".

To conserve energy and to prevent freezing, insulate both the cold and the hot water supply lines. DO NOT cover the drain valves.

WATER PRESSURE GUIDELINES

Operation of the gas geyser requires a minimum water pressure of 14 psi (0,5 Bar) and a minimum water flow rate of 2.5 Litres/min.

1. For long pipe runs water pressure can drop and additional water pressure may be required.
2. When the water is supplied from a water tank, the height of the tank, the diameter of the pipes and their relation to water pressure, should be taken into consideration.
3. 5 meters above the shower head is a minimum requirement if this is not possible then gravity fed water is not recommended

WATER SUPPLY

1. Sufficient water pressure and flow rate
2. Make sure there are no water leaks and that the water filter is clean.
3. Only compliant or specified materials must be used

IMPORTANT

If the water flow is too slow, the gas geyser will not ignite. Keep the shower head clean from debris that reduces flow rate.

To keep the water pressure balanced add a 400-600kpa pressure regulating valve on the cold water supply. Install a shutoff valve near the inlet of the gas geyser for service and draining purposes.

Be sure to connect the water inlet and the hot water outlet as shown on the gas geyser. If reversed, the gas geyser will not function.

Installation of unions or flexible copper connections are recommended on the hot and cold water lines, so that the gas geyser may easily be disconnected for servicing.

Install a non-return between the gas geyser and the water shutoff valve.

HOT WATER OUTLET

Connections between the gas geyser and the usage points should be as short as possible.

DO NOT use lead or plastic pipe. To save energy and reduce heat loss we recommend insulating the water piping.

NOTE The flow rate of hot water may vary when more than two taps or fixtures are being used at the same time.

GAS SUPPLY LEAK TESTING

1. The gas geyser and its gas connections must be tested for leaks at the normal operating pressures before using it.

2. Turn on the gas shut-off valve(s)

3. Use a soapy water solution to test for leaks at all connections and fittings. Bubbles indicate a gas leak that must be fixed.

4. Once the appliance is operating, the factory connections also need to be tested for leaks.

VENTING/FLUEING

DO NOT connect the gas geyser to an existing vent or chimney, it must be vented separately from any other appliances.

All vent components such as adapters, pipe and pipe length should not exceed more than 1.5 meters. Secure supports should be used. **DO NOT use wire.**

DRAINING THE CONDENSATION

In cold conditions, installations with long horizontal or vertical runs may accumulate condensation in the flue.

In order to prevent condensation from draining back into the appliance, we recommend installing a condensation trap and a drain.

WARNING: Never use an open flame to test for gas leaks as this could result in property damage, personal injury and or death.

GAS GEYSER LOCATION

1. Close to flue extraction area .
2. Protected from freezing temperatures.
3. Clear 800mm of space from combustible surfaces.
4. Sufficient ventilation.
5. Air supply must be free of corrosive elements and flammable vapours.
6. Sufficient space to service the appliance.
7. Gas geyser must be securely mounted to the wall.
8. The gas geyser must be installed at least 1400mm off the ground.

GAS SUPPLY

1. Gas type matches specification table.
2. Sufficient pressure for the gas supply.
3. Gas line equipped with a shut off valve.
4. A soapy solution must be used to check all connections and fittings for gas leaks.
5. The COC issued and signed.

VENTING

1. Only compliant or specified materials must be used.
2. Vent connector(s) pitched downward to termination 12mm downwards of the length of flue supplied.
3. Properly support all vent runs.
4. Make sure Vent terminal is installed properly.

ELECTRICAL CONNECTION POWER CORD

Electrical connections and wiring must comply with national standards.

- 220 V/50HZ is the electric power supply requirement.
- The gas geyser comes with a 13 amp plug. Only use a power outlet with a earthed terminal.
- We recommend installing an electrical leakage breaker.
- Keep the excess power supply cord on the outside of the gas geyser.

WARNING

Before servicing the gas geyser, turn off the electrical power to the gas geyser at the plug or circuit breaker. Failure to do so could result in electrocution.

Label all wires prior to disconnecting them when servicing controls. Wiring errors can cause malfunctions.

Operation instructions

SAFETY PRECAUTIONS WHEN OPERATING

Open the cold water valve to allow water through the geyser. Close the valve after the cold water is flowing out through the water outlet and you can hear the geyser start to ignite.

1. Open the gas supply.
2. Open the water inlet valve and the geyser will ignite immediately. Hot water should flow out instantly. The geyser may not ignite the first time due to an airlock, try turning it off and then on until the geyser ignites.
3. Be aware of the water flowing out of the geyser as the temperature of the water will be hot initially and may burn you.

WARNING

1. Do not attempt to fix or maintain this gas geyser unless you are qualified to do so.
2. The exhaust pipe must be installed to extract the products of combustion to the outside atmosphere.
3. When the geyser is operating, if you discover a gas leak, close the gas valve immediately. Contact your gas installer to repair the leak, do not use the gas geyser until the leak has been fixed.
4. Do not block the flue or the air inlet. This can cause incomplete combustion which creates harmful gases if inhaled and may damage your gas appliance.
5. Pay attention to the flame picture from time to time. If there is abnormal combustion such as a bright yellow flame, close the gas valve right away and contact the gas installer for maintenance.
6. To avoid the pipes from freezing during sub zero temperatures, discharge the remaining water after use.
7. The body of the gas geyser can become very hot during operation, so please do not touch any parts of the gas geyser except for the control panel or switches.
8. While using the gas geyser, please pay attention to the initial water temperature to prevent burning yourself or others.

9. Inspect the gas pipes and flexible hoses regularly. If you find joints that are not tightly secured or if there are cracks, you should stop using the appliance and perform the necessary maintenance.
10. Turn off the gas shut-off valve if your gas geyser has been subjected to over heating, fire, flood, physical damage or if the gas supply fails to shut off.
11. Do not turn on the appliance unless water and gas supplies are fully opened.
12. Do not allow combustible materials such as newspaper, rags or mops to accumulate near the appliance.
13. Do not store or use petrol or other flammable vapours and liquids, such as adhesives or paint thinner, in the vicinity of this or any other gas appliance.
14. If such flammables must be used, open doors and windows for ventilation.
15. Appliances in the vicinity should be shut off to avoid vapours igniting from the gas burner.
16. Flammable vapours can be drawn by air currents from surrounding areas to the inlet of gas geyser.

ADJUSTING THE OVER PRESSURISATION VALVE

When you have done a new installation and have connected the water, then you can use a small or medium flat screw driver to UNSCREW the grubscrew in the hollow centre of the over-pressurisation valve until the water leaks out.

Then screw it BACK IN 1.5 turns. This will mean that the over-pressurisation valve is set to the customers water pressure supply and in the event of the water in the pipes freezing the valve will squirt out a small amount of water and allow the water to freeze in the geyser without causing damage.

WATER TEMPERATURE SETTINGS

The gas geyser temperature can be regulated by adjusting the setting on the front of the control panel.
Safety factors should be considered so please read and follow the warnings outlined on **page 7.**

Mixers can be used to adjust the temperature at the water outlet.

When the burner is switched on, maximum water temperatures are reached. The water temperature is determined by turning on a hot water tap. Water temperature at the tap will vary depending on the weather and length of piping from the gas geyser.

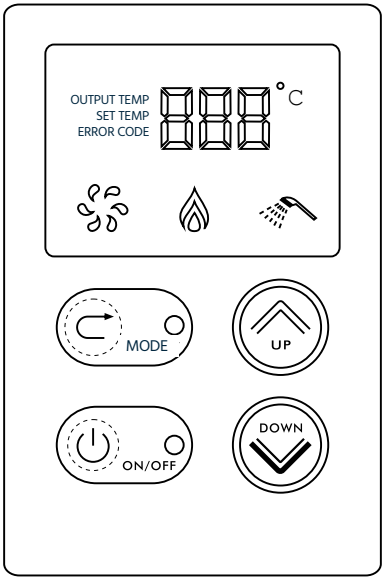
This gas geyser contains an electronically controlled thermostat. Factory defaults range between 37°C and 70°C.

The control panel has been preset to 41°C.

To turn the control panel ON or OFF, hold the POWER button for more than 3 seconds.

Set the temperature as required by pressing the UP or down arrows on the temperature button.

By pressing the UP or DOWN you buttons will adjust the temperature point by 1°C increments.



LED Display
(Displays water temperature and Error Codes)

SETTING YOUR GAS GEYSER TO THE CORRECT TEMPERATURE

The gas geyser should be set to such a temperature that you should not have to add too much cold water. If you set the temperature too high and have to cool it down using the cold water, you have effectively wasted gas. Try set the geyser so that you only have to open the hot water tap only.

Start by setting the geyser to 41°C for pipe runs shorter than 3m. If your pipe runs are from 3-5m try setting the geyser at 43°C and for pipe runs longer than 5m try setting the geyser at 46°C. If you find these temperatures are not satisfactory then increase the temperature by 1-2°C at time until you feel the water is hot enough.

The hottest water temperature will be from the hot water tap closest to the gas geyser.

Always remember to test the water temperature with your hand before use and remember that hotter water settings increase the risk of injury.

The gas geyser is fitted with a device that will shut off the gas supply to the burner if the appliance exceeds normal operating temperatures.

The appliance won't operate with a water flow of less than 3 litres/minute. If this occurs, increase the water flow.

GENERAL

If your gas technician maintains your gas geyser you should not have any issues with it for years.

We recommend that you periodically check the burner, relief valve, air intake filter, water filter and venting system. This needs to be done by a certified installer. A maintenance program is advisable.

Inspect the area around the gas geyser to ensure that its in a safe operating environment.

Make sure that the appliance has not been damaged. If there are traces of damage or denting contact your supplier to check that the appliance is still functioning properly.

Check for any abnormal sounds while operating your appliance.

Check for gas/ water leaks.

The air and cold water supply filters should be cleaned monthly.

NOTE

1. Before manually operating the relief valve, make sure the gas geyser has not been in operation, this is to avoid hot water discharge from the relief valve.
2. If you don't perform regular maintenance the geyser can start operating poorly which can cause carbon monoxide poisoning, excessive hot water temperatures or other potentially hazardous conditions.
3. Make sure the electrical power to the gas geyser is off to avoid electrocution or damage to components.
4. Combustible materials, such as clothing, cleaning materials, or flammable liquids, etc. must not be placed against or next to the gas geyser.

DO NOT

1. Continue to use the gas geyser if you feel something that there is something wrong with it.
2. Allow children to operate or handle the appliance.

After you have checked, maintained and/ or cleaned the appliance, make sure that it is working properly by turning on the hot water tap.

Cleaning

GENERAL

- Turn the appliance off and disconnect the power supply before cleaning the gas geyser.
- Clean the appliance and remote control by using a damp soft cloth only. Gently wipe the surfaces of the appliance and any remaining moisture with a dry soft cloth.
- Do not store household items near or on top of the appliance
- Filters should be cleaned on a monthly basis.
- DO NOT scrub the appliance with a brush.
- Use only water, any chemicals can damage the surface of the appliance.
- DO NOT remove any labels, including the rating table when cleaning or servicing.
- DO NOT splash water on the remote controls when cleaning.

CLEANING THE WATER FILTER

- Turn the appliance off and disconnect the power supply.
- Turn the water supply to the appliance off.
- Unscrew the water filter and slide the filter out.
- Do not tap the filter as it may damage it.
- Remove particles - use a soft brush and rinse it with running water.
- Put the filter back and screw it in.
- Turn on first the electrical power supply and second the cold water supply.

CAUTION

Cleaning of the main burner should always be performed by Registered LPG Installer.

A compressor can be used to clean the burner.

VENT INSPECTION

The venting system should be checked annually to ensure that all of the vent sections are secure and air-tight.

DO NOT operate the appliance if vent system shows signs of leaking.

Check to make sure that the AIR INTAKE and the VENT TERMINAL has not been blocked or contain debris.

BURNER INSPECTION

Visually check the main burners annually.

Use the sight glass to check the flame picture, the flame should be a clean blue flame only.

If a yellow flame occurs, the gas geyser should be shut down and you should call a qualified installer to assess the appliance.

Bubbles around a joint connection indicate a seal leak.

VACATION AND EXTENDED SHUT-DOWN

If the gas geyser is left for an extended period of time, the power and gas to the appliance should be turned off.

The gas geyser and piping should be drained if they could be subjected to freezing temperatures over this period. After a long shut-down period, the gas geyser needs to be serviced and checked.

Troubleshooting

Symptom	Cause	Solution
Not enough or no hot water	The water valve is not completely open	Check the valve and make sure its opened to its maximum.
	The hot water tap is not completely open	Make sure that the tap is opened to its maximum. (When the incoming water flow below 2.5lt per min the main burner shuts off).
	The water pipes are frozen	Let the pipes defrost
	Appliance is not "ON"	Turn the appliance "ON" by the button on the remote control.
	The temperature may be set too low	Increase the temperature setting on the controller.
	Mixer malfunction	Check and replace the mixer.
	Error code displayed on remote control panel	See Error Codes on page 23 and contact an installer.
Fan continues to rotate after hot water faucet is closed.	This function is to remove any burnt or unburned gases from the burning chamber.	Normal operation. There is no need to call for service.

Symptom	Cause	Solution
Water too hot	The temperature is set too high	Turn down the temperature on the controller.
	The water valve is not completely open so the flow rate will be too slow	Check the valve and make sure its opened to its maximum.
	The Water filter is clogged	Clean the filter with a tooth brush to avoid a slow flow rate.

for comprehensive troubleshooting, please visit our website

www.gasgeysers.co.za/support/troubleshooting

Error code guide

WHEN AN ERROR CODE IS DISPLAYED

Close the hot water tap, turn off the switch on the remote control.

- Wait for about 5 minutes before turning the switch on again.
- Open the hot water tap.

IF THE ERROR CODE REMAINS SHOWN

Close the hot water tap and turn off the switch on the remote control.

- Take the proper action shown below and attempt operation of the appliance again.

IF THE ERROR CODE IS STILL SHOWN

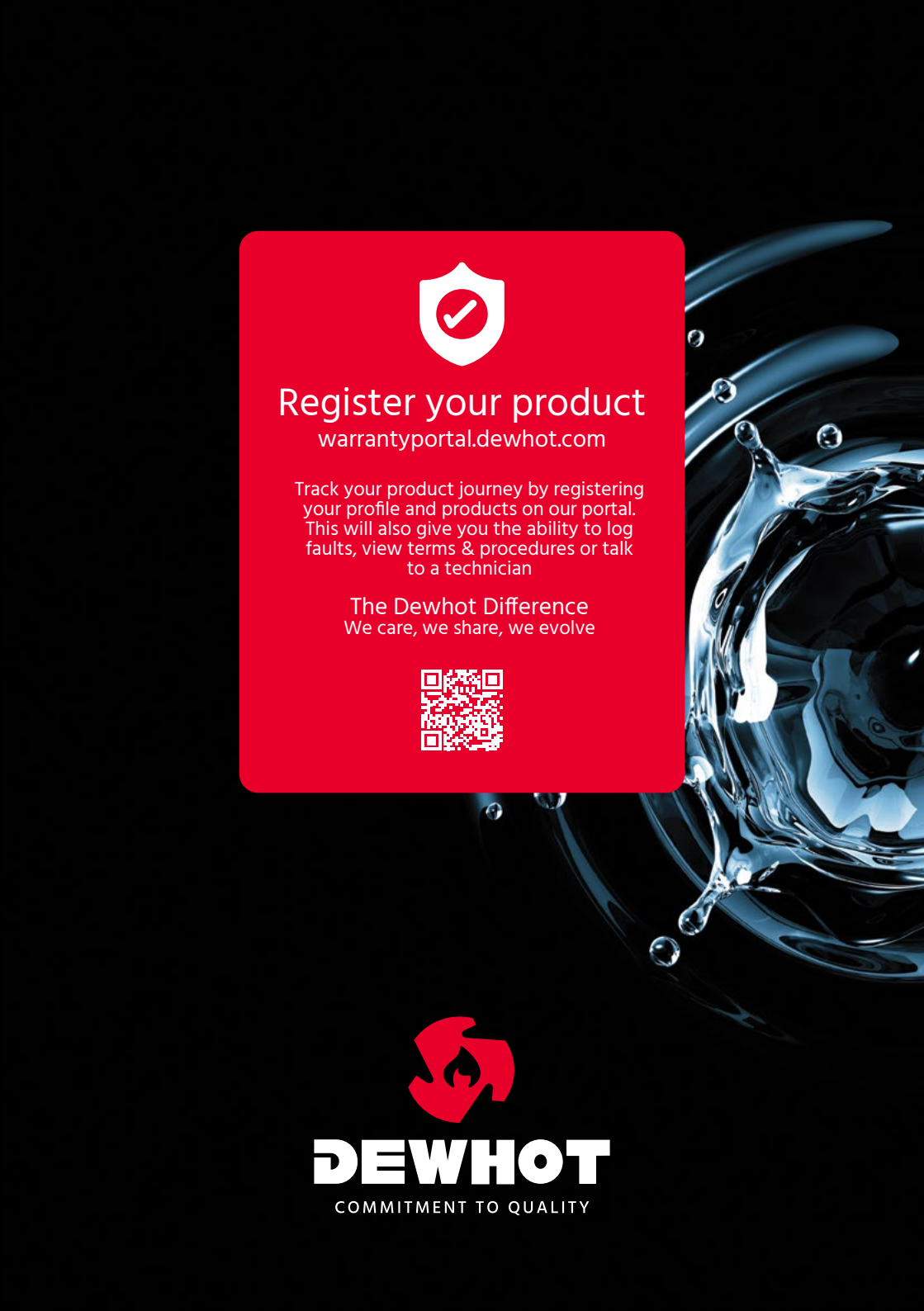
Turn off the hot water tap and turn off the switch on the remote control .

- Take note of the error code displayed and call the Technical Service number on the back cover.
- If an error code other than those listed below is displayed, immediately turn off the hot water tap, take note of the error code, turn off the switch on the remote control and call the Technical Service number.

CAUTION

- For your safety DO NOT attempt to repair gas piping, remote control, burners, vent connectors or other safety devices. Only a Registered LPG Installer should do this.
- Turn off the power to the gas geyser before removing protective cover.

Error Code	Reasons	What To Do
E0	Water temperature sensor trouble	Close tap and restart appliance
E1	Ignition failure	Check whether gas valve is open, gas tank is empty or nearing empty, close water then restart
E2	Flameout accidently	Check whether gas valve is open or water pressure too low, close water and restart
E3	Hot water output temperature too high or dry combustion	Contact your installer
E5	Flame affected by wind	Contact your installer
E7	PC Board (ignition controller) failure Or fan failures	Contact your installer
E8	Water inlet temperature failure	Contact your installer
Eb	Residual flame problem	Contact your installer


Register your product
warrantyportal.dewhot.com
Track your product journey by registering your profile and products on our portal. This will also give you the ability to log faults, view terms & procedures or talk to a technician
The Dewhot Difference
We care, we share, we evolve
DEWHOT
COMMITMENT TO QUALITY