

BUSHRANGER 4x4 GEAR

bushranger.com.au



Free Call | 1800 654 767 (Australia only)

International | +61 2 8700 0400

Fax | +61 2 8700 0499

Email | sales@kingsleyenterprises.com.au

Address | 6A Brooks Road, Ingleburn NSW 2565

BUSHRANGER 4x4 GEAR



PORTABLE GAS HOT WATER SHOWER



OWNERS MANUAL

78X04

BUSHRANGER

4x4 GEAR

Congratulations on your purchase of the Bushranger® Gas Hot Water Shower. To take full advantage of this product, please read this manual carefully before using. Retain this manual for future reference for installation and warranty.

Warranty

Kingsley identified below (the Product) will be free from defects in materials and workmanship for the warranty period identified below commencing on the date of purchase from Kingsley ('the Warranty').

Kingsley, will rectify any defect in materials or workmanship appearing within the Warranty period by repairing or replacing the Product (at its option).

Kingsley reserves the right to determine whether the Product contains any defects in materials or workmanship covered by the Warranty.

The benefits offered by this Warranty are in addition to your rights and remedies under the Australian Consumer Law. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

How to make a warranty claim

A claim under the Warranty must be made within the Warranty period identified below, which commences on the date of purchase from Kingsley. To make a Warranty claim, the Product must be returned to the place of purchase together with proof of purchase unless otherwise agreed by Kingsley.

Any costs incurred in making a Warranty claim or returning a Product to the place of purchase are to be borne by the person making the Warranty claim unless otherwise agreed by Kingsley.

Exclusions

This Warranty does not cover any defect or injury caused by, or associated with improper installation or maintenance; unauthorised service, repair, modification or alteration; unsuitable physical or operating environment; electrical supply; acts of God; misuse, abuse or neglect; accidental damage, or other alterations or modifications which affect the reliability or performance of the product not attributable to a defect in materials or workmanship.

Warranty Period

The period in which a defect must appear in a Kingsley Enterprises or Bushranger 4x4 Gear product if the customer is entitled to claim the warranty is 12 months from the date of purchase from Kingsley Enterprises Pty Ltd.

The warranty against defects contained in this document replaces any other warranty against defects or voluntary warranty given in relation to the products.

Kingsley Enterprises Pty Ltd

6A Brooks Road, Ingleburn 2565
New South Wales, Australia
Phone: 1800 654 767
International: +612 8700 0400
Email: sales@kingsleyenterprises.com.au

78X04_Manual_01

Troubleshooting (continued)

Problem	Cause
Water is Not Hot Enough	Adjust the gas regulator and water regulator to meet your desired temperature. To Increase temperature; turn the gas regulator control from minimum to maximum and turn the water regulator control from maximum to minimum. Also, switch burners from "Low" to "High".
	Check source water temperature. If the source water temperature is too cold then you may need to recirculate the water through the system back into the source reservoir then through the appliance again to meet your desired temperature.
	Check if there is a blue flame in the 'viewing window'. If you see a yellow flame there may be debris in the unit. Turn unit off immediately. Try to clear debris with compressed air. If further assistance is required please call 1800 654 767.
	Check your Gas Cylinder to ensure it is not empty. If using a new cylinder; try to cycle the unit on and off by using the Shower Head switch several times to purge the air from the gas lines.
Water Pump not working	Make sure the power source for the pump is adequate enough and has enough charge to operate the pump
	Ensure all connections are securely joined and the switch is in the ON position
	Pressure switch may be broken.
	Pump motor may have failed.

Technical Assistance and Spare Parts

The Bushranger Gas Hot Water Shower has been inspected, tested and set by expert personnel prior to leaving the factory to guarantee quality.

We always recommend contacting the place of purchase, specifying the model, serial number and type of problem you are having with the unit. If unavailable contact:

Kingsley Enterprises Pty Ltd
PO Box 6007, Minto BC 2566

Phone: 1800 654 767 International: +612 8700 0400
Fax: 1800 655 196 Email: sales@kingsleyenterprises.com.au

Table of contents

Product Information	1
Safety Instructions.....	3
Performance.....	4
Specifications.....	7
Set Up	9
Operation	11
Care and Maintenance.....	17
Trouble Shooting.....	18
Technical Assistance.....	19
Warranty	20

Important

It is IMPORTANT that you read these instructions carefully and understand the operation and safety features of this appliance. Familiarise yourself with the appliance before connecting it to its gas container. Keep these instructions for future reference.

The manufacturer reserves the right to make all the modifications to its products that it deems necessary or useful, also in your interests, without prejudicing its essential functional and safety characteristics.

The manufacturer cannot be held responsible for any inaccuracies due to printing or transcription errors that may be found in this handbook.

Note: the pictures shown in the figures in this handbook are purely indicative.

- Adjustments and maintenance must only be carried out by an authorised person.
- The installation of all gas and combustion appliances must comply with the standards in force. For more information contact your state regulatory office.
- The appliance must only be used for what it has been made for heating water.
- Any other use is considered improper and, as such, dangerous.
- The manufacturer cannot be held responsible for any harm to people or damage to property deriving from an incorrect installation or maintenance or from an erroneous use of the appliance.
- Once the outer wrapping and the inner wrappings of the various parts have been removed, check and make sure that the appliance is in perfect condition. If you have any doubts do not use the appliance.
- The packaging materials used (cardboard, bags, polystyrene foam, nails, etc.) must not be left anywhere in easy reach of children because they are a potential hazard source. To safeguard the environment all packaging materials are environment-friendly and recyclable.
- In the case of a failure and/or malfunction, DON'T ATTEMPT TO REPAIR. Take the appliance back to the place of purchase, if unavailable call our customer service team on 1800 654 767 detailing the trouble and product information.

Troubleshooting

This guide should be followed in case of failure of the appliance to operate correctly. If symptoms persist contact Customer Service on 1800 654 767

Problem	Cause
The Appliance will not light at all	Make sure you have new batteries installed in the correct position. Negative should be down closest to you and Positive towards the back. In high humidity conditions it may be necessary to clean and dry the battery box prior to operation.
	Check for sufficient water pressure. The unit must have a minimum of 25KPA of sustained pressure to activate the burners.
	There may be debris within the water inlet. Remove connections to the inlet and inspect. Remove any debris that may be blocking the unit and retry.
	The gas line may need purging. Turn gas to maximum and burners to High on the unit and turn the water on/off a few times.
	Check that water is flowing through correctly. Make sure "Water In" is on the right and "Water Out" is in the middle.
	Make sure the On/Off switch is turned on, do this by having the Red dot pushed in.
Water flows through, but the unit will not get hot	If unit fails to ignite when LED display lights and ignition is clicking. <ol style="list-style-type: none"> 1. Disconnect all gas attachments from the unit and gas bottle. 2. Re-connect your gas line to the unit including all tape and washers (do not turn the gas on). 3. Turn your water supply on. Once the unit starts to click, turn your gas bottle on slowly and watch for ignition through the window.
	New batteries may be required for the ignition switch. Verify that the batteries are aligned in the proper polarity (+/-). Check the battery case.
	Check that the water pressure is at least 25 kPa to activate the burners.
	Make sure there is an adequate amount of gas in your bottle.
	Check that water is flowing through correctly. Make sure "Water In" is on the right and "Water Out" is in the middle.
Try the unit on mains water if possible, if this works, there is an issue with the pump. Please make sure your pump meets requirements.	

Care and Maintenance

Your LPG Portable Water Heater has a metal casing and a stainless Steel face plate and so, should be cleaned after each use. This will not only maintain the appearance of your Gas Hot water Shower, it will also add to its longevity. Clean your LPG Portable Water Heater by following these steps:

1. Wipe down using a pH neutral soap solution, diluted in clean water.
2. Only use non-abrasive fibre brushes or sponges while cleaning.


More frequent cleaning may be necessary for coastal and tropical climates or in salty or corrosive environments.

Always ensure no debris is present in the flue or unit as this may cause a fire when use.

NOTE: Failure to clean your LPG Portable Water Heater adequately or failure to follow these cleaning instructions will void your warranty.

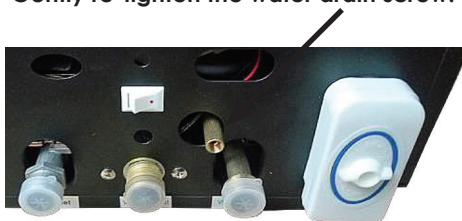
The use of ABRASIVE materials and/or ALKALINE based cleaners will damage the LPG Portable Water Heater. Their use is strictly prohibited and will void your warranty.

If you are unsure of how to adequately clean and maintain your LPG Portable Water Heater, please contact your place of purchase for further information.

 If using water other than drinking quality water ensure the pump filter supplied is clean before each use.

 Storage, Frost / Freezing temperatures: If the appliance is to be stored for any length of time or subjected to temperatures below freezing, it is necessary to drain any water trapped in the appliance.

1. Disconnect the inlet water hose.
2. Allow the hot water hose and shower rose to hang down.
3. Loosen the screw in the water drain valve located at the bottom of the appliance, (near to the water inlet fitting) allowing the appliance to drain.
Gently re-tighten the water drain screw.



Warnings

 **CAUTION!**

- THIS APPLIANCE IS NOT INTENDED FOR THE SUPPLY OF DRINKING WATER.
- THIS APPLIANCE IS INTENDED FOR THE SUPPLY OF HEATED WATER FOR THE PURPOSE OF WASHING AND CLEANING ONLY.
- CHECK AND CONFIRM SAFE WATER TEMPERATURE BEFORE USING THIS APPLIANCE. WATER FROM THIS APPLIANCE MAY BE VERY HOT.
- THIS APPLIANCE MUST BE PROTECTED FROM RAIN
- THIS APPLIANCE IS DESIGNED FOR OUTDOOR USE ONLY.
- USE ONLY IN WELL-VENTILATED AREAS.
- Do not use the appliance if it has a leak, or has worn, deteriorated or damaged seals. Accessible parts may be very hot. Keep young children away.
- It may be hazardous to attempt to fit other types of gas containers or cartridges.
- This appliance is to be stored in a dry & well-ventilated location free from direct sunlight. Do not store when still connected to the cylinder. Make sure that the cylinder is disconnected and is stored in a well-ventilated area, free from direct sunlight, heat and ignition sources. If being stored indoors, ensure that the location complies with the standard AS/NZS1596.
- Do not use adaptors or modify the appliance to fit other connectors or cylinders.
- When using this appliance, children must be supervised by an adult at all times
- Never leave appliance unattended when operating.
- Do not use as a cooking appliance or modify for any other reason.
- Avoid twisting & kinking the Propane Gas hose.
- Do not place articles on or against this appliance.
- Do not place chemicals or flammable materials, or spray aerosols near this appliance.
- Do not operate with panels, covers or guards removed from this appliance.
- If you smell gas immediately turn the gas off at the cylinder and move the appliance & cylinder to a well-ventilated area outside, keeping well away from sources of heat such as naked flames & pilot lights. Check for leaks using soapy water as stipulated on page 5.
- Do not attempt to move or relocate the appliance whilst it is operating. Extinguish the burner & allow cooling. Disengage the gas cylinder then move the appliance.

Safety Instructions

This appliance shall only be used in an above ground open air situation with natural ventilation, without stagnant areas, where gas leakage and products of combustion are rapidly dispersed by wind and natural convection.

The following figures are diagrammatical representations of outdoor areas suitable for use with this appliance. Rectangular areas have been used in these figures – the same principles apply to any other shaped areas. Any enclosure in which the appliance is used shall comply with one of the following:

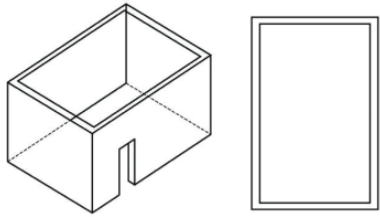


FIGURE D1 – Outdoor Area Example 1.

An enclosure with walls on all sides, but no overhead cover.

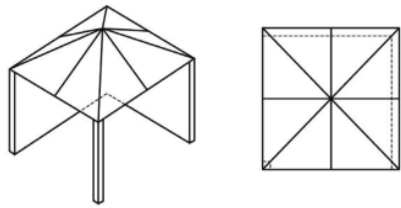


FIGURE D2 – Outdoor Area Example 2

Within a partial enclosure that includes an overhead cover and no more than two walls.

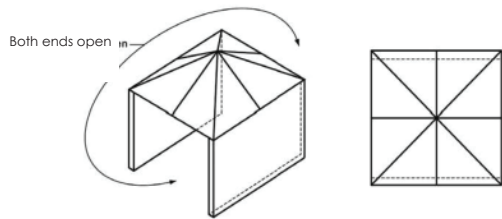


FIGURE D3 – Outdoor Area Example 3.

With both ends open.

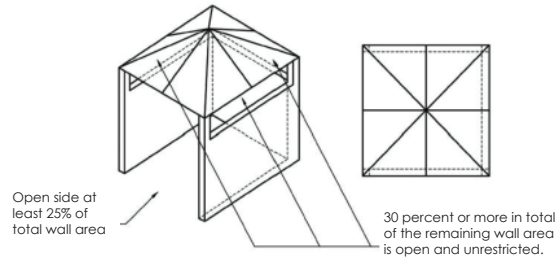


FIGURE D4 – Outdoor Area Example 4. With the open side at least 25% of total wall area and 30% or more in the total of the remaining wall area is open and unrestricted.

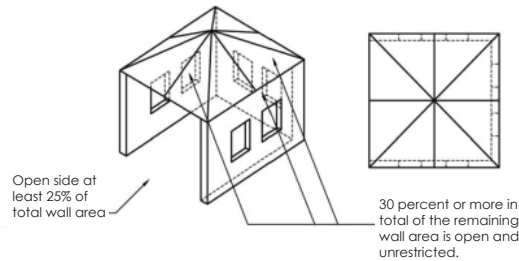
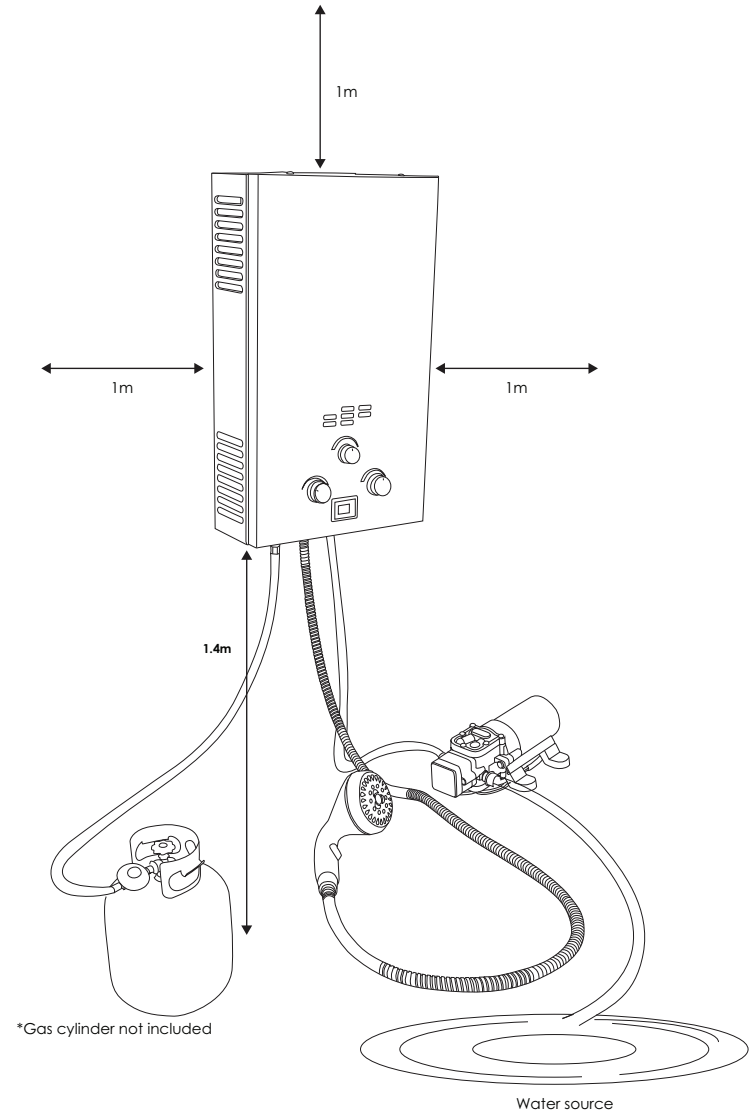


FIGURE D5 – Outdoor Area Example 5. With the open side at least 35% of the total wall area and 30% or more in total of the remaining wall area is open and unrestricted. In the case of balconies, 20% or more of the total wall area shall remain open and unrestricted.

Typical Installation Above



The supplied meter LPG hose and regulator assembly connects to a 9 kg LPG cylinder (maximum size). The water heater is then located 1.4 meters from ground level to the connection points as shown above. Water pump and fresh water tank are to be located in a convenient position as shown.

Installing the 12V Pump

1. Install the pump in a suitable high and dry position to avoid any contact with water, as the pump is not waterproof.



Important: The pump must be NOT be installed with the motor facing downwards.

2. It is recommended to secure the pump to a mounting plate or bracket (not provided).

3. Checking the direction of flow indicator arrows on the pump.

a. Using a hose clamp (supplied), connect a 1.5m length of fresh water hose to the pump inlet. The other end of the inlet hose is located at a potable water source.

b. Using a hose clamp (supplied), connect the 1.5m length of fresh water hose with crimped swivel fitting from the pump outlet to the Gas Hot Water Shower.



Keep pump inlet hose (suction) and pump outlet hose (pressure) as short as practical as not to exceed suction and pressure head. Excessive suction or pressure head may cause damage to the pump and will void warranty.

4) Connect the pump to a suitable 12 Volt power source (When not using the Power Cable provided) Installation Tips for fixed mounting:

a. It is recommended to seek a qualified auto electrician when fixed mounting of the water pump. It is important to use the correct gauge wire for the distance from 12V power source and the current draw from the pump. Improper installation may cause the pump to not function correctly and/or fail.

b. Be careful to properly route and secure all wiring.

c. Fuse appropriately.

d. Toggle switch with adequate amp rating is required to allow for ON/OFF operation.

5. Operate the pump, inspecting every joint and pipe run for leaks.



WARNING: Do not use a 240-volt pump or other electrical appliances where they could be affected by water.

Carbon Monoxide Hazard



This appliance can produce carbon monoxide, which has no odour. Using it in an enclosed space (For example, caravan, tent, car or mobile home) may cause DEATH.

Hanging The Appliance

OUTDOOR USE ONLY – The appliance must be used outdoors only and is to be operated no closer than 1000mm from the sides and 1000mm from above to all combustible surfaces, fabrics, flammable materials & people

The appliance is designed to be hung upright against a non-combustible vertical surface. Do not operate from a non-upright position. Doing so can be dangerous and will damage the appliance.

During operation ensure that air inlets and the top exhaust are kept free from obstructions and closure.

Appliance Performance

Important – This appliance is designed to be used with a source water temperature of 20°C or below. If the temperature of the outlet water exceeds 50°C the burners will shut off; you will be required to turn the water flow off and back on to reignite the burners.

This appliance is designed to raise the outlet water temperature by a maximum (average) of 25°C above the source water temperature and can be adjusted by the gas regulator and water regulator control knobs located at the front of the device.

Gas Type

This appliance shall only be used with the Australian Approved Propane gas hose & regulator assembly supplied with the appliance and must be connected only to a Propane gas cylinder certified to AS2469 and AS2030.1 standards fitted with POL connections only.

This appliance and gas cylinder is to be stored in a dry and well ventilated location free from direct sunlight, heat and ignition sources. Do not store when still connected to the gas cylinder. If being stored indoors, ensure that the location complies with AS/NZS 1596.

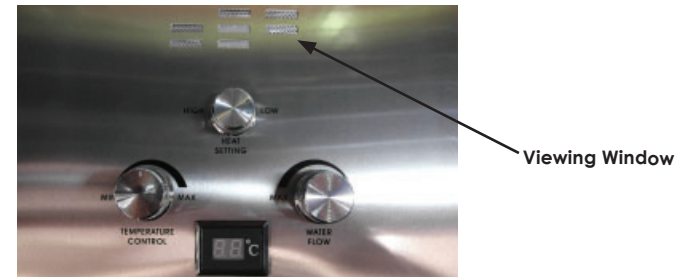
WARNING: It is hazardous to attempt to fit other types of gas containers. Connect and change cylinders in a well-ventilated location, preferably outside away from people and any sources of ignition, such as naked flames, pilot flames, electric heaters/equipment.

Checking For Gas Leaks

- Ensure rubber seals (i) between the regulator and gas cylinder, and (ii) between the hose assembly and appliance inlet are in place and in good condition before connecting the gas cylinder.
- Check that all connections are tight and that the gas cylinder connection has been tightened before you turn the cylinder gas valve on.
- NEVER check for leaks with a flame or pilot light.
- Using soapy water, coat all connections, if bubbles appear, turn the cylinder gas control off and retighten the connection before re-testing.
- Inspect the appliance regularly for signs of wear, leaks or incorrect operation. If symptoms such as flaring of the burners, issues with lighting, damages to hoses or connections or leaks from seals or gas controls are identified do not attempt to repair, contact customer service on: 1800 654 767.
- To check if gas remains in the cylinder, disconnect from the appliance and hold the cylinder in a vertical position then shake from side to side. If there is a sound or feel of liquid movement inside the cylinder contains gas.
- When changing gas cylinders ensure this is conducted outside in a well-ventilated location free from people, animals & ignition sources such as naked flames, pilot lights & electrical equipment such as heaters or elements.

11. Turn on the pump to allow water to flow through the shower unit.

Note: You should hear a series of clicks and then the burner should ignite. The burner flame can be seen operating through the 'viewing window' located at the front of the appliance.



12. Adjust the temperature of the water flowing from the shower head by turning the 'temperature control' and 'water flow' knobs.

Note 1: For higher temperatures, increase the HEAT SETTING control and decrease the WATER FLOW control. Switch the TEMPERATURE CONTROL from MIN to MAX will increase the temperature further.

WARNING

IMPORTANT – Water remaining in the heat exchanger while the flow is stopped may become very hot. It will require water to flow through the unit for a short time to clear the hot water. The user must check the temperature output to ensure it is suitable and not too hot before showering.

A temperature in excess of 50°C will activate the Over Temperature Safety Sensor and will shut down the burners. To relight the burner you will need to either:-

- Turn the switch off on the unit and allow cool water to flow through the unit until it drops the internal temperature low enough to reignite the burner.
- Turn the water flow and gas off, allow unit to cool for 30min then reignite.

Note 2: When using the 12V Pump provided with the water regulator knob set to "low", a small amount of pulsing may be experienced at the shower rose. This is normal.

Note 3: After use, turn the gas cylinder valve off, wait for the flame to go out, then turn the appliance control valve off.

7. IMPORTANT

It is important that when starting the appliance that the temperature control is set to the 'min' position.

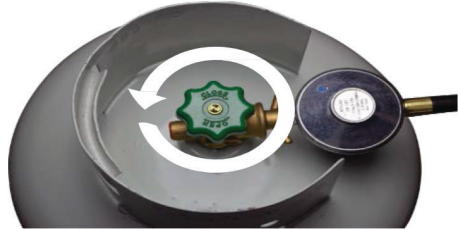


8. IMPORTANT

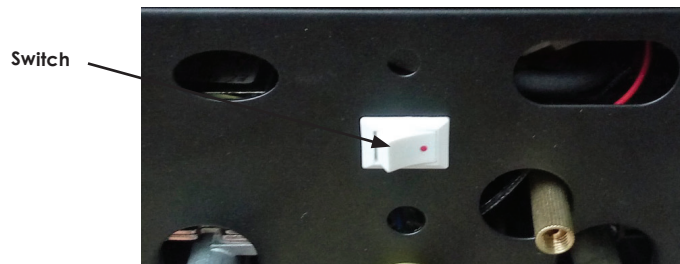
It is important that when starting the appliance that the water flow is set to the 'max' position.



9. Turn the gas cylinder on in an anti-clockwise direction one (1) full turn.



10. Switch LPG Water Heater ON using the rocker switch located at the bottom on the LPG Portable Water Heater. Do this by having the red dot pushed in.



Safety Features

This appliance has been designed in accordance with and tested to AS2658. It is equipped with the following safety features:

Over-temperature sensor – the appliance will not allow the burner to remain in operation once the outlet water temperature reaches 50°C. To relight the burner you will need to either:-

- Turn the switch off on the unit and allow cool water to flow through the unit until it drops the internal temperature low enough to reignite the burner.
- Turn the water flow and gas off, allow unit to cool for 30min then reignite.

Water flow sensor – water must be flowing through the system to allow the burner to ignite. In the case that the water supply is restricted or no longer flows. For example, if you close the water flow at the shower nozzle, the burner will be extinguished and will not relight until the water flow recommences.

Tilt Switch – this safety device will not allow the burner to operate if the appliance is any more than 45 degrees from its normal operating position. To relight the burner you will need to turn the water flow off, position the appliance to the normal operating position and turn the water flow back on.

Exhaust Flue Sensor – the appliance will shut down if the exhaust flue becomes partially or fully restricted from operating properly. To relight the burner, turn all gas and water devices off, remove restriction or re position the appliance in safe operating location and start the appliance as per instructions.

List of Parts Supplied

- 1 x LPG Portable Water Heater
- 1 x Gas hose and Regulator assembly
- 2 x Batteries 'D' Cell
- 1 x Water Pump – 4.3lpm, 12V DC
- 1 x Shower Rose with Hose and On/Off Switch
- 2 x Hose + hose clamps + fittings
- 1 x Pump wiring harness

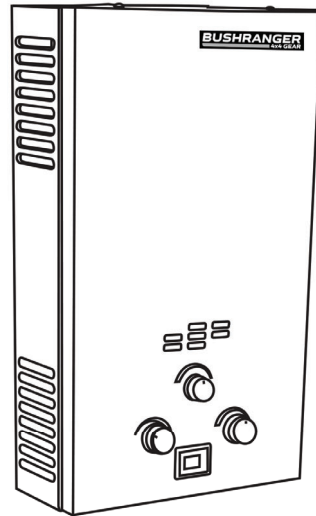
Not included: Spanner, Screw Driver, Fresh Water Tank/Container or similar, Water Pump 12V DC Power Supply and Gas Bottle.

If required, contact Bushranger 4x4 Gear for advice on the above items.

Specifications

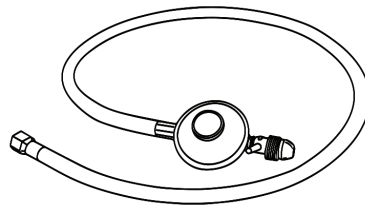
Heat Exchanger

Model Number	78X04
Australian Standard	AS2658
IAPMO	GMK10458
Injector Size (mm)	0.62
Total NGC (MJ/h)	28
TPP (kPa)	2.75
Min. Water Pressure (kPa)	25
Max. Water Pressure (kPa)	1000
Size (mm)	500 x 300 x 140
Weight (kg)	4.7
Power (kw)	12
Water flow rate (max) (L/min)	6



Gas Hose and Assembly Regulator

Model Number	T-2A & T-3A
Australian Standard	AS/NZS 1869 AS/NZS 4621
AGA Certificate No.	7087
Inlet Pressure (kPa)	250 – 1750
Outlet Pressure (kPa)	2.8
Temperature Limit (°C)	-20 to 60
Regulator Classification	Low-Pressure Gas Regulator
Flow Rate (kg/h)	1.5
Mounting Preferences	Horizontal with conical face up
Inlet Connection	POL Fitting with Left-Hand thread
Size (mm)	35 x 75 x 1630 (hose included)
Weight (kg)	0.45



- Once you determine that there are no leaks present with the gas valve open, turn the cylinder valve to the off (close) position.



- Connect water supply by either pump supplied or alternate pressurised water source.
Our heater is now set up and ready for use. Notice: the positioning of the gas cylinder away and to the side of the appliance; never place the gas cylinder directly beside or above the appliance.



- It is preferable to set the Heat Setting Control to LOW



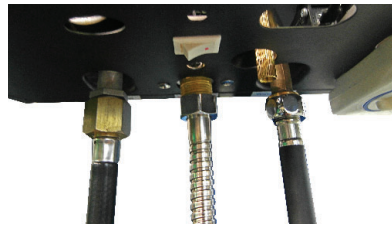
Operation

Now that the appliance has been prepared for our intended use, we can set it up for operation.

1. Find a suitable sturdy, non-combustible vertical surface to hang the appliance. The surface should be at least 1000mm clear from the sides and 1000mm from the top of all combustible surfaces, fabrics, flammable materials & people.

Hang the appliance on a suitable vertical surface by the top hanger attached to the back cover of the heater.

The appliance is ready to be connected to gas and water hoses.



Gas Hose and Regulator Shower Hose

2. Connect the Gas Hose to the POL Propane gas cylinder. Hand-tighten the connection in an anti-clockwise direction.



3. IMPORTANT

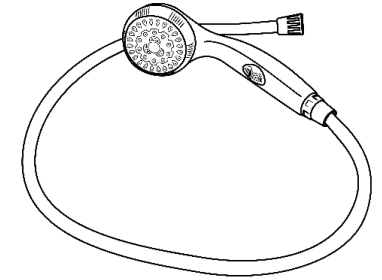


Open gas tap on cylinder one full turn, and then check the connections for leaks with soapy water.

DO NOT use a flame. If a leak is detected, turn the cylinder valve off (close), check seals and retighten all connections and retest.

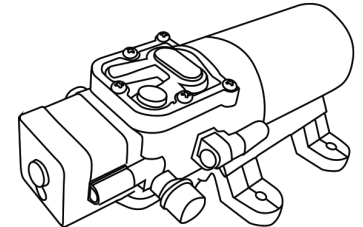
Shower Rose

Max. Flow Rate (l/m)	6 (Heat Exchanger Limited)
Flow Restriction	On / Off Switch
Flow Variations	4
Dimensions (mm)	2.75
Weight (kg)	0.27
Max. Water Pressure (kPa)	900
Size (mm)	400 x 295 x 140
Weight (kg)	0.26



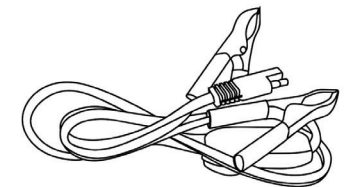
Pump

Model Number	FL-022
Power Supply (V DC)	12
Power Demand (Amps)	3.5
Pump Type	Diaphragm Pump
Pressure (PSI)	35
Flow Rate (l/m)	4.3
Size (mm)	185 x 110 x 65
Weight (kg)	0.67



Power Cable

Length (m)	2
Power Supply (V DC)	12
Fuse (Amps)	4
Connection type	Cigarette and Alligator Clamps



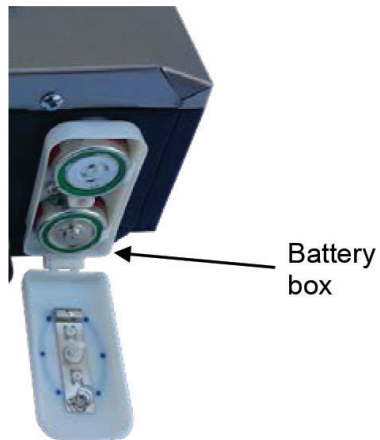
Set Up

Before using the appliance, it is important to prepare the appliance by installing the proper adaptors to suit our intended use. In this example, we will be preparing the portable water heater to be used with a hose input from a 12-volt pump.

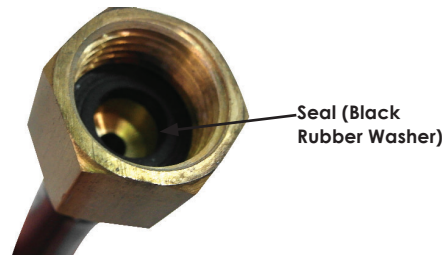
1. Remove the heater along with all the components from the box and place them on a table. Notice that there is a gas input, hot water output, cold water input as well as a battery box.



2. Insert two 'D' batteries into the 'battery box' and close the battery box lid. Note: The orientation of the battery terminals.



3. Locate the Gas Hose and Regulator. It requires a black rubber seal to be inserted into the end shown below.

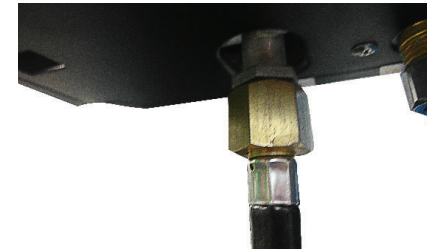


 **Seal (Black rubber washer):**

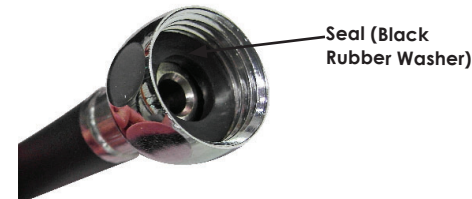
4. DO NOT USE TEFLON TAPE on the gas or water fittings. The unit has been designed to be assembled with the use of rubber washers.



5. Fit and tighten the hose fitting with a spanner, taking care not to over tighten as this could break or crack the inlet pipe. The 'gas input' is now ready to be connected to the gas regulator hose.



6. Attach black inlet hose to unit via crimped swivel fitting. Ensure a seal is inserted into the fitting.



 **Seal (Black rubber washer):**

7. Tighten the hose, taking care not to over tighten as this could break or crack the inlet pipe.



8. Connect free end of Water Hose to the outlet side of the pump. Use a hose clamp to fix hose to pump. Attach other hose to inlet of pump with hose clamp. See Page 15 for more details.



9. Fit seal to chrome flexible shower hose, then attach hexagonal end to the 'water out' connection (middle connection) on the water heater. Do not over tighten.

Ensure a seal (supplied) is inserted into the connector at both ends of the flexible shower hose.



 **Seal (Clear rubber washer):**

10. Attach the shower rose to the flexible shower hose using the conical end fitting. Hand force only. Do not over tighten.

