



EXTERNAL GAS HOT WATER UNIT

INSTALLATION AND OPERATING
INSTRUCTIONS

MODELS GK1620/GK2020/GK2620

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INSTALLATION INSTRUCTIONS

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INTRODUCTION

Apricus GK1620 / GK2020 / GK2620 INSTALLATION INSTRUCTIONS

1. INTRODUCTION

The Apricus GK1620/GK2020/GK2620 is an external electronic gas hot water heater. The Apricus GK1620/GK2020/GK2620 are factory set to deliver 70°C for use as a solar booster application. This temperature must not be altered. These models are not suitable for use in any other application. This instructions must be read in conjunction with the Apricus solar hot water systems technical (install) manual.

THIS HOT WATER UNIT IS NOT FOR POOL OR SPA HEATING

GENERAL

- 1.0.1 The Apricus GK1620/GK2020/GK2620 must be installed in accordance with
- (1) These manufacturer's instructions;
 - (2) Uniform Building Regulations Local authority regulations;
 - (3) AS/NZS 3500.4 "National Plumbing and Drainage Code, Part 4 Hot Water Supply Systems",
 - (4) The Australian Gas Association installation code AS 5601 for gas burning appliances and equipment;
 - (5) Any other statutory regulation that may apply;
 - (6) A notice of intention to install shall be lodged with the relevant Municipal Authority and local Gas Authority prior to installation.

**INSTALLATION MUST BE CARRIED OUT ONLY BY
AN AUTHORISED AND APPROPRIATELY LICENSED PERSON.**

1.0.2

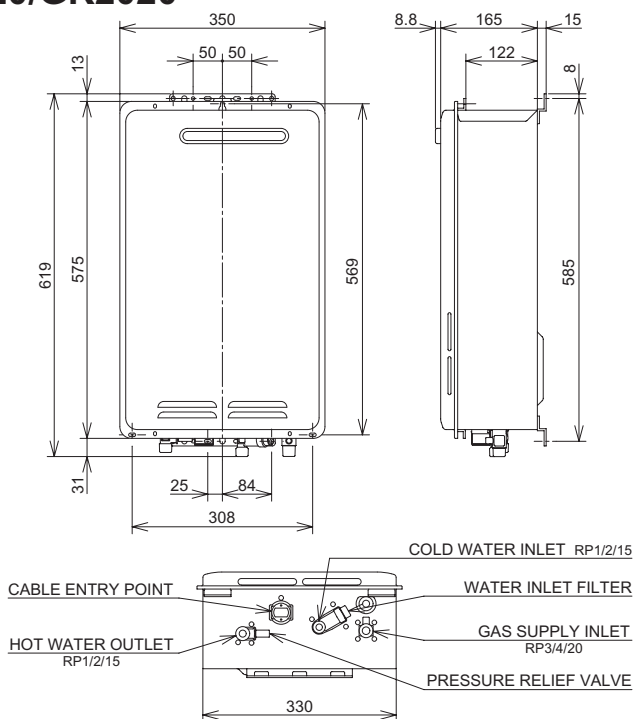
DELIVERY INSPECTION

The Apricus HOT WATER unit is supplied fully assembled for installation.

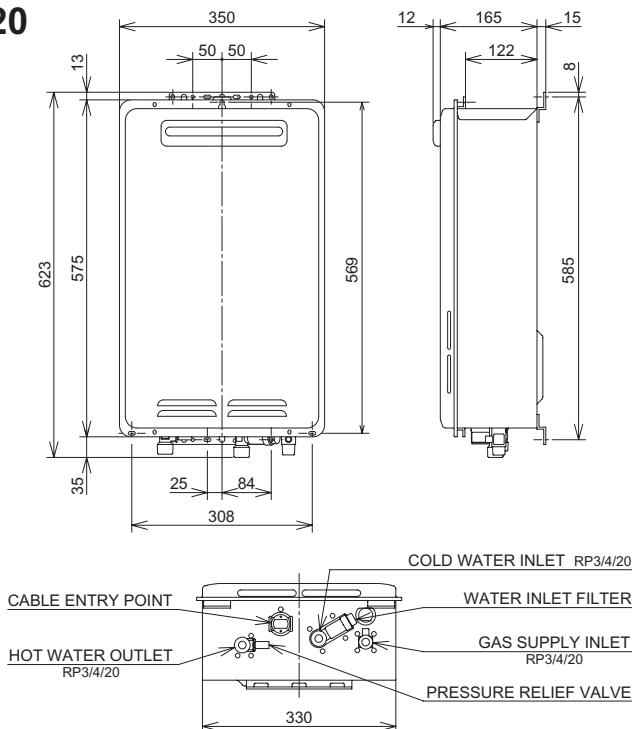
The customer or installer upon delivery of the unit should immediately remove all packing materials and inspect the unit for damage and ensure that the unit supplied is correct for the gas supply to which it is to be connected. If any concerns, please report any damage or discrepancies to the supplier quoting the serial number and model number, which can be found on the outside of the cabinet.

DIMENSIONS CONNECTIONS

Model: GK1620/GK2020

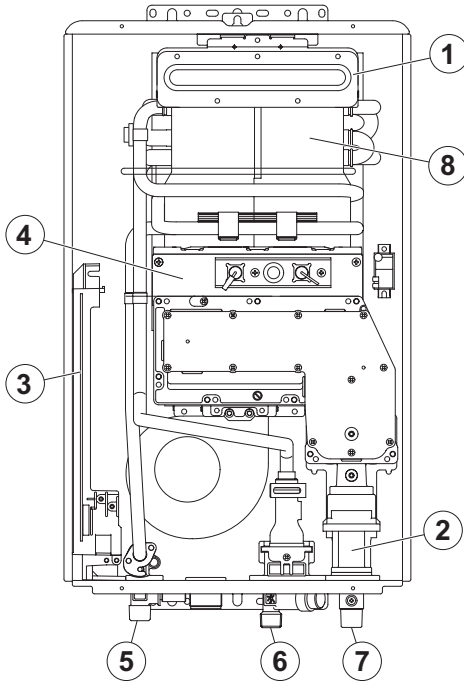


Model: GK2620



INTERNAL SCHEMATIC

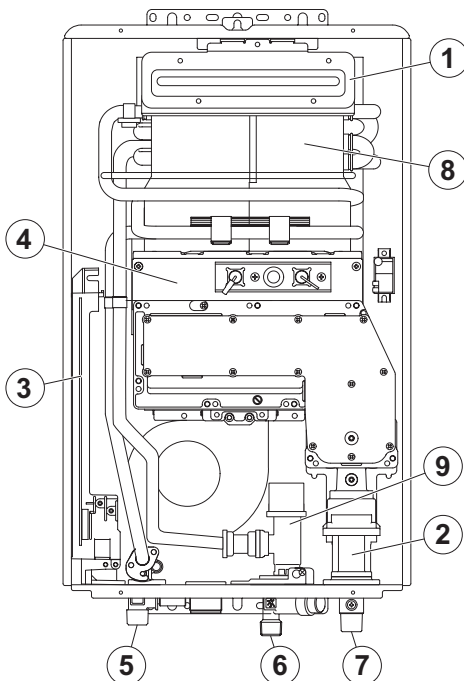
Model:GK1620/GK2020



NOS. PARTS DESCRIPTION

- 1 FLUE OUTLET
- 2 GAS VALVE
- 3 CIRCUIT BOARD
- 4 BURNER CASE
- 5 HOT WATER OUTLET
- 6 COLD WATER INLET
- 7 GAS SUPPLY INLET
- 8 HEAT EXCHANGER

Model:GK2620



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- 8 HEAT EXCHANGER
- 9 WATER VOLUME PROPORTIONAL VALVE

TECHNICAL DATA

1.1 TECHNICAL DATA AND DIMENSIONS APRICUS GK1620 / GK2020 / GK2620

MODELS		GK1620	GK2020	GK2620
Nominal hourly gas consumption by proportional electronic gas control	MJ/h	125	160	200
Test point pressure (NG)		.40	.56	.68
Test point pressure (LPG)		.40	.61	.70
Water heating capacity raised 40°C	L/M	10	12.5	16.25
Maximum working pressure	kPa	1200		
Gas injectors diameter (NG)	mm	1.35/1.65		1.34/1.65
Gas injectors diameter (LPG)	mm	1.35/1.65		1.0/1.2
Input voltage single phase 50Hz	V	240		
Maximum output current	Amp	0.37	0.45	0.47
SAIG Approval certificate no.		GSCS20021		
Inlet gas connection male thread	mm	18		
Cold water connection male thread	mm	13		18
Hot water connection male thread	mm	13		18
Relief valve pressure setting	kPa	1400		
Weight dry	kg	16		17
Dimensions (DxWxH)	mm	165 x 350 x 575		

1.2 DATA PLATE

Left outside of cabinet

1.3 GAS TYPE

The temporary gas label is located on the left outside of cabinet.
The label is the gas that this appliance is designed to operate with.

DO NOT OPERATE WITH ANY OTHER GAS TYPE.

1.4 WARNING LABELS

Located on the side of the cabinet.
PLEASE READ THESE LABELS CAREFULLY.

1.5 INSTALLATION POSITION

THIS HEATER IS APPROVED FOR OUTDOOR INSTALLATION ONLY-IT IS NOT SUITABLE FOR INDOOR USE.

Refer to AS 5601 for clearance details for flue terminal.

In addition, ensure that the appliance installation position permits easy access for maintenance and operation.

For further information, please refer to the Gas Fitting Regulations.

1.6 POSITION FOR INSTALLATION

The heater must be installed by using a fixing method sufficient to hold the weight of the unit (see the technical sheet for dimensions of mounting brackets and positions).

GAS CONNECTION

1.7 GAS CONNECTION

- (1) Fit a union to the water heater gas inlet for easy connection and removal. The thread diameter is 18mm.
THIS DOES NOT INDICATE THE SIZE OF THE GAS SUPPLY refer to AS 5601 for guidance on pipe sizing.
- (2) Fit an AGA approved isolating gas cock in the supply line adjacent to the water heater gas connection.
- (3) Ensure that the supply pipe and the gas pressure regulator (LPG or Natural Gas) has sufficient flow capacity for this and other appliances connected to the fitting line.
- (4) For LPG appliances ensure that gas cylinders are of sufficient size. The water heater alone will require a regulator of 4KG per hour capacity.
- (5) Before connecting the appliance to the gas service purge any debris or air from the gas service. Venting of purged gas shall be an area free of sources of ignition.
Close the isolating gas cock prior to connection of the appliance.
- (6) After connection check all joints for leaks with an approved leak tester.

Refer to AS 5601 Installation Code for pipe sizing details.

The Apricus GK1620/GK2020/GK2620 requires a minimum of 125/160/200 MJ/h respectively.

If the gas pipe sizing is insufficient, the customer will not obtain the full performance benefit. Gas pipe sizing must consider the gas input to this appliance as well as all the other gas appliances in the premises.

COLD WATER CONNECTION

1.8 COLD WATER SUPPLY TO WATER HEATER

Refer to the Technical Sheet for the position of connections. Minimum of 13mm for model GK1620/GK2020 and 18mm for model GK2620 copper tube should be connected to the appliance. The WATER INLET connections are 13mm BSP for model GK1620/2020 and 18mm BSP for model GK2620 and requires a union to allow for removal of the water heater. Pipe sizing from the cold water supply should be sized according to local BY LAWS for water supply.

ISOLATING GATE VALVE or BALL VALVE

A GATE VALVE or BALL VALVE must be used on the cold water inlet to the water heater.

THIS REQUIREMENT IS AN AUSTRALIA WIDE REQUIREMENT UNDER THE NATIONAL PLUMBING CODE.

IF THE ABOVE INSTRUCTION IS NOT CARRIED OUT ALL WARRANTIES ON THE UNIT WILL BE VOIDED.

**STOP TAPS OR COMBINATION STOP TAPS AND
NON-RETURN VALVES ARE NOT TO BE USED!**

**N.B. NO PRESSURE REDUCTION VALVE IS
REQUIRED UNLESS THE INLET WATER
PRESSURE EXCEEDS 1400kPa AT ANY
TIME OF THE DAY. EG EARLY HOURS
OF THE MORNING.**

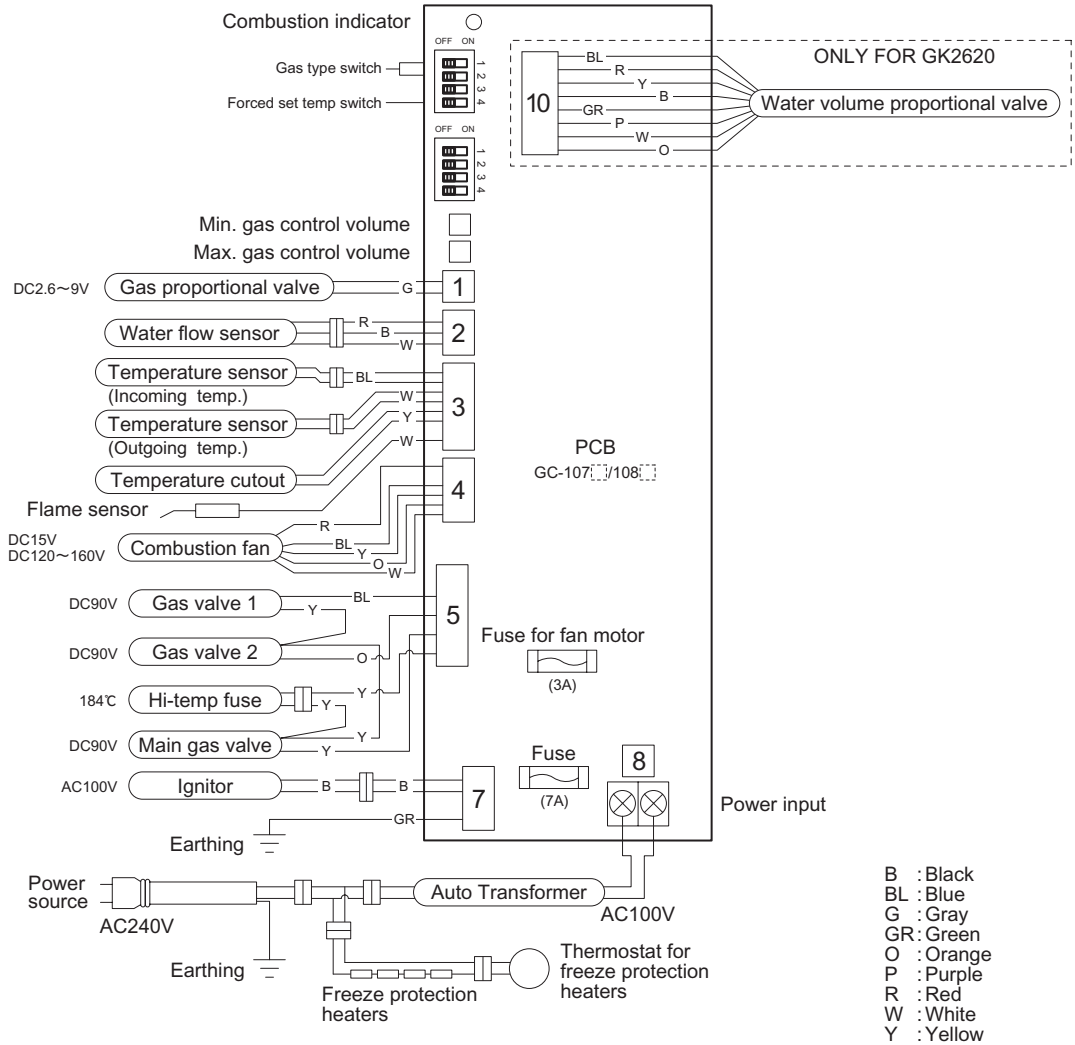
HOT WATER CONNECTION

- 2.0 Refer to Technical Sheet for the position of connection. The outlet connection is 13mm for model GK1620/GK2020 and 18mm for model GK2620 male thread and requires an isolating union to allow for removal of the unit.
- 2.1 Install the hot water supply line to the unit in a minimum of 13mm for model GK1620/GK2020 and 18mm for model GK2620 copper tube.
For units set at 50°C this must be a minimum of Four(4) Metres to the first outlet.
- 2.2 Keep the pipe lengths to a minimum and make sure that the pipework is well insulated, as correct performance of the appliance is dependent on properly insulated pipework.
- 2.3 DO NOT FIT ANY VALVES OR RESTRICTORS TO THE OUTLET OF THE WATER HEATER.
- 2.4 DO NOT FIT ANY OBSTRUCTION TO THE PRESSURE RELIEF LOCATED ON THE HOT WATER OUTLET CONNECTION.
- 2.5 After purging the air from the system using the hot water supply taps, remove the water inlet strainer located on the cold water supply inlet connection.
Remove any debris from the filter and replace. When replacing the filter do not over tighten the "O"ring seal.

ELECTRICAL REQUIREMENTS

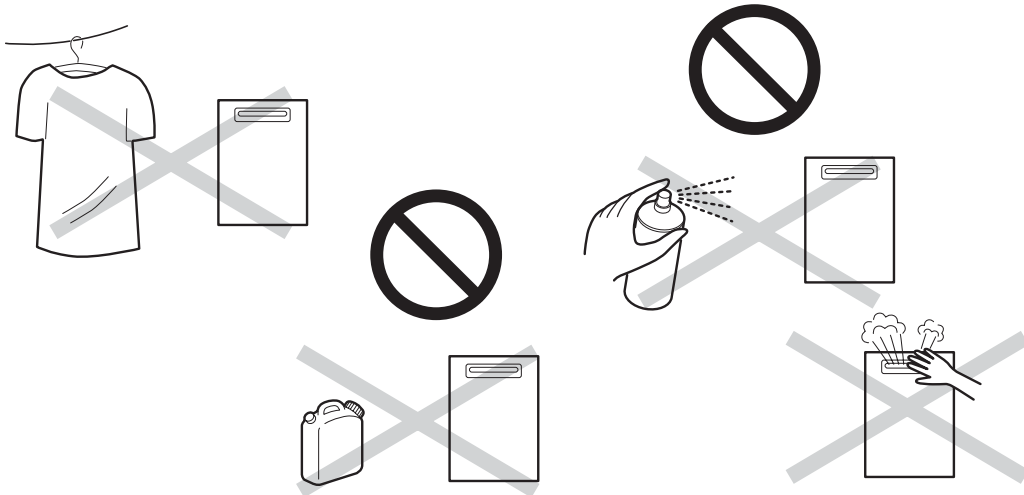
- 3.0 The appliance is equipped with a three pinned earthed plug to be connected to a 220-240V 50Hz power supply. The electrical rating of the appliance is 0.37/0.45/0.47Amp. for the Apricus GK1620/GK2020/GK2620 respectively.
- 3.1 The appliance requires a 240V 50Hz weatherproof power outlet installed in a protected position adjacent to the appliance.
- 3.3 **IMPORTANT:** The appliance should always be disconnected from the power supply before any maintenance is carried out.

WIRING DIAGRAM

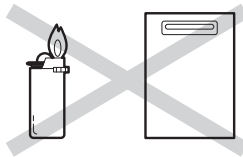


CARE OF THE APRICUS HOT WATER UNIT

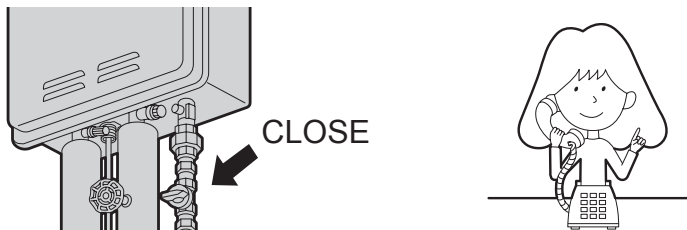
1. DO NOT HANG WASHING OR OTHER MATERIALS ADJACENT TO THE UNIT.
2. DO NOT STORE INFLAMMABLE MATERIALS WITHIN 2 METERS OF THE UNIT.
3. DO NOT TOUCH THE FLUE OUTLET OF THE UNIT DURING OR IMMEDIATELY AFTER OPERATION.



4. IF ANY GAS SMELL COMES FROM THE UNIT, DO NOT USE NAKED FLAMES TO TEST FOR GAS LEAKS.



5. TURN OFF THE GAS SUPPLY AND POWER AND CONTACT YOUR GAS SUPPLY COMPANY.



6. IF A POWER FAILURE OCCURS, CLOSE AND OPEN THE HOT WATER OUTLET AGAIN WHEN POWER IS RESTORED.

HINTS FOR USING THE APRICUS UNIT

POINTS NEEDED FOR YOUR SPECIAL ATTENTION

Danger

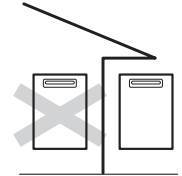
NO INSTALLATION INDOORS

(May cause oxygen deficiency accident or incomplete combustion.)

The unit is outdoor installation type. Never install indoor or in the bathroom. It will be extremely dangerous since it will cause oxygen deficiency and incomplete combustion.

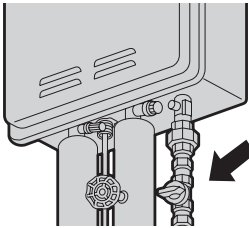


Prohibited



Warning

WATCH FOR GAS LEAK (May cause fire.)



Close



No Fire



Prohibited

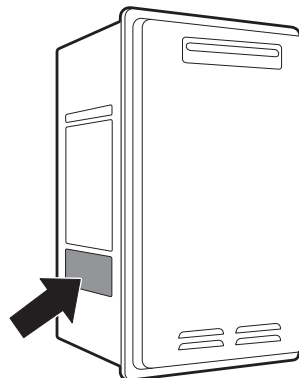
When gas leak is noticed, stop using the unit immediately and close the gas valve, then contact the installer of the unit .

CONFIRM TYPE OF GAS AND POWER SUPPLY

(May cause incomplete combustion, explosive ignition or fire.)



Check



Make sure to use the gas type as well as power supply (voltage / frequency) as indicated on the RATING LABEL located on the cabinet side.

There are Natural Gas and Propane Gas on the GAS TYPE LABEL.

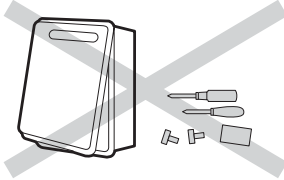
HINTS FOR USING THE APRICUS UNIT

Warning

NO DISASSEMBLY, REPAIR OR MODIFICATION
(May cause fire, electric shock or other accidents.)



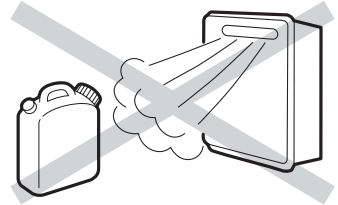
No Disassemble



CAUTION FOR INFLAMMABLE ITEMS
(May cause fire or explosion.)



Warning



Do not disassemble or modify the units. Never fail to ask professional assistance from the dealer you have bought your unit from for such a case as installation, removing, auxiliary installation work or connection to the solar units.

Do not place any inflammable items such as gasoline or benzene nor use them around the unit. Take special care.

Freeze Prevention.

This unit comes equipped with electric heaters that discourage the water heater from freezing.

To enable this freeze prevention system to operate there must be an electrical power supply connected to the unit.

The freeze prevention devices will not operate if the electrical power source is not connected.

Caution.

The electric heaters are installed inside the water heater only all External Hot and Cold water supply pipes and fittings connected to the water heater should be properly insulated.

Warning

CAUTION TO PREVENT SCALDING

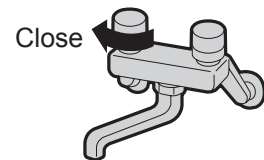


Check the water temperature by hand first before using shower.

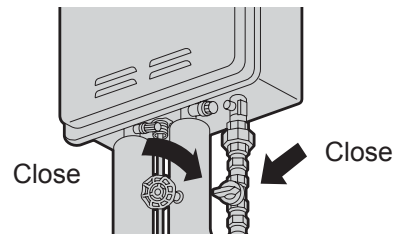
MEASURE TO BE TAKEN IN CASE OF EMERGENCY

When there is an emergency such as earthquake or fire, apply following procedure.

1. Close the hot water outlet.



2. Close the gas valve and the main water valve.



3. Turn off the main power.

However, in case of gas leakage, first close the gas valve then wait for the leaked gas to disperse then turn off the main power supply.



4. Contact the dealer from whom you bought the unit.



HINTS FOR USING THE APRICUS UNIT

Caution

DANGER OF WET HANDS
(May cause electric shock.)



Do not touch power plug with wet hands. It is dangerous, because it can cause electric shock.

INSERT POWER PLUG PROPERLY INTO TERMINAL



Check the power plug for dust accumulation, then properly insert to the power point.

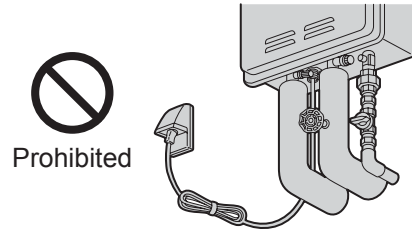
DO NOT PULL POWER CORD
(May generate heat and cause fire.)



Do not turn off the power plug by pulling the cord. It may generate heat by wire breakage then cause fire.

If the power supply cord is damaged, it should be replaced by a cord available from Apricus Agents.

DO NOT USE POWER CORD BUNDLED
(May generate heat and cause fire.)



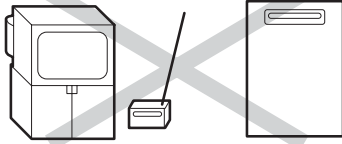
Never use power cord in a bundled condition. It will cause heat generation and fire.

Caution

DO NOT INSTALL NEAR ELECTRIC APPLIANCES



Check



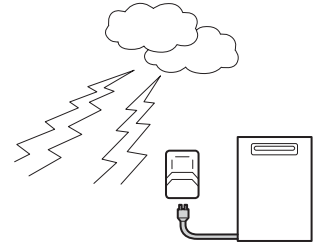
When installed near to TV or radio, it may cause picture disturbance or sound disturbance. Install away from those appliances.

MEASURE TO BE TAKEN FOR LIGHTNING POSSIBILITY

(May cause failure.)



Pull
No wet hand

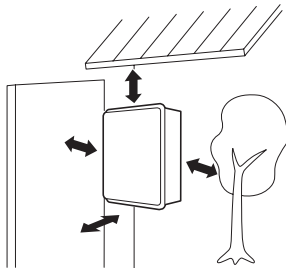


Instant overflow voltage caused by lightning can damage the electronic parts. Therefore, turn off the main power when you experience thunder.

SECURE SERVICE SPACE



Check



Make sure to secure sufficient space around the unit for checking and maintenance.

FAULT MONITOR

FAULT MONITOR

THE APRICUS HOT WATER UNIT HAS A SELF DIAGNOSING FUNCTION FOR FAULTS

When the unit does not operate correctly, the red indicator is flashed on PCB.
The cause of the fault can be determined after checking the number of flashing on PCB.

NUMBER OF FLASHING	PROBLEM	REMEDY
1	GAS BURNER FAILS TO IGNITE.	CHECK GAS SUPPLY.
2	FALSE FLAME DETECTION.	CALL SERVICE CENTRE.
3	LOSS OF COMBUSTION.	CHECK GAS SUPPLY AND PRESSURE.
4	RESIDUAL FLAME SAFETY DEVICE.	CALL SERVICE CENTRE.
5	THERMISTOR WIRE BREAKAGE.	CALL SERVICE CENTRE.
7	COMBUSTION FAN FAILURE.	CALL SERVICE CENTRE.

PLEASE NOTE FAULTS CAUSED BY INSUFFICIENT GAS SUPPLY, INCORRECT GAS PIPE SIZE, INSUFFICIENT WATER SUPPLY, GAS QUALITY, WATER QUALITY, INSTALLATION ERRORS OR OPERATION ERRORS ARE NOT COVERED BY THE APRICUS WARRANTY. REFER TO PAGE 17 FOR DETAILS.

PLEASE NOTE REPLACEMENT POWER CORD FOR THIS APPLIANCE CAN BE OBTAINED FROM THE APRICUS SERVICE DEPARTMENT TELEPHONE 1300 277 428.

PLEASE NOTE ONLY AUTHORISED PERSONS ARE TO PERFORM SERVICE WORK ON THIS APPLIANCE FAILURE TO COMPLY TO THIS CONDITION WILL VOID THE WARRANTY AND COULD MAKE THE APPLIANCE UNSAFE.

SCHEDULED SERVICE PERIODS

This water heater requires scheduled maintenance at regular 12 monthly periods to obtain the maximum service life and safe operation.

WARRANTY CONDITIONS

Apricus Continuous Flow

1. All Apricus water heaters must be installed by a Licensed installer.
2. Only Authorised personnel must Install, Commission or Service Apricus water heaters.
3. All Apricus water heaters must be installed in accordance with Manufacturer's Installation Instructions and in Accordance with local regulations, municipal building codes and current AS/NZS3000, AS/NZS3500, AS 3498 and AS5601.
4. If the Apricus water heater has not been installed in accordance with Manufacturer's Installation Instructions or installed as to be easily accessible for servicing, a service charge may apply.
5. Where a component may have failed under warranty and is replaced, the component replaced will only be covered by the warranty for the balance of the appliance warranty period.
6. Water Quality must be within limits specified in table below.

pH	Sodium	TDS (Total Dissolved Solids)	Chlorides	Iron	Magnesium	Alkalinity (as CaCO ₃)	Dissolved (free) CO ₂	Total Hardness CaCO ₃
6.5 to 8.5	Up to 150 mg/litre or ppm	Up to 600 mg/litre or ppm	Up to 300 mg/litre or ppm	Up to 1 mg/litre or ppm	Up to 10 mg/litre or ppm	Up to 200 mg/litre or ppm	Up to 25 mg/litre or ppm	Up to 200 mg/litre or ppm

The warranty will be rendered void in the following circumstances:

1. Failure due to misuse, Acts of God, accidental damage, installation by an installer who is not unauthorised to install an Apricus water heater or incorrect installation and attempts to repair Apricus by an unqualified person.
2. Repairs and service carried out by a person who is not a Qualified Service Person or Authorised Service Agent.
3. Faults caused by incorrect installation, water problems, electricity supply and or gas supply.

The warranty does not cover the following:

4. Subject to any statutory provisions to the contrary, claims for damages to walls, foundations etc or any other consequential loss caused either directly or indirectly by leakage from the water heater or any other faults.
5. Warranty does not cover any faults that may arise from connecting to a water source that is unfiltered such as dams, bores, rivers etc.

Apricus does not accept liability for consequential damage or any incidental expenses resulting from any breach of the Warranty.

Warranty Terms

Apricus Water Heaters are covered by Apricus for any cost of labour and parts in the event of a component failure due to any defects that may arise either from workmanship and or faulty material.

The Warranty commences on the date of Installation:

Domestic Appliance	Apricus Product	
Heat Exchanger	Parts	10 Years
	Labour	1 Year
All Other Parts	Parts	3 Years
	Labour	1 Year

Definition of Domestic Use:

1. Units installed in any domestic dwelling.
2. Units installed in any gas boosted solar system in a domestic dwelling.
3. Units used in any household applications.