

# BRITONY II.T

Room Sealed Balanced Flue  
MULTI POINT WATER HEATER

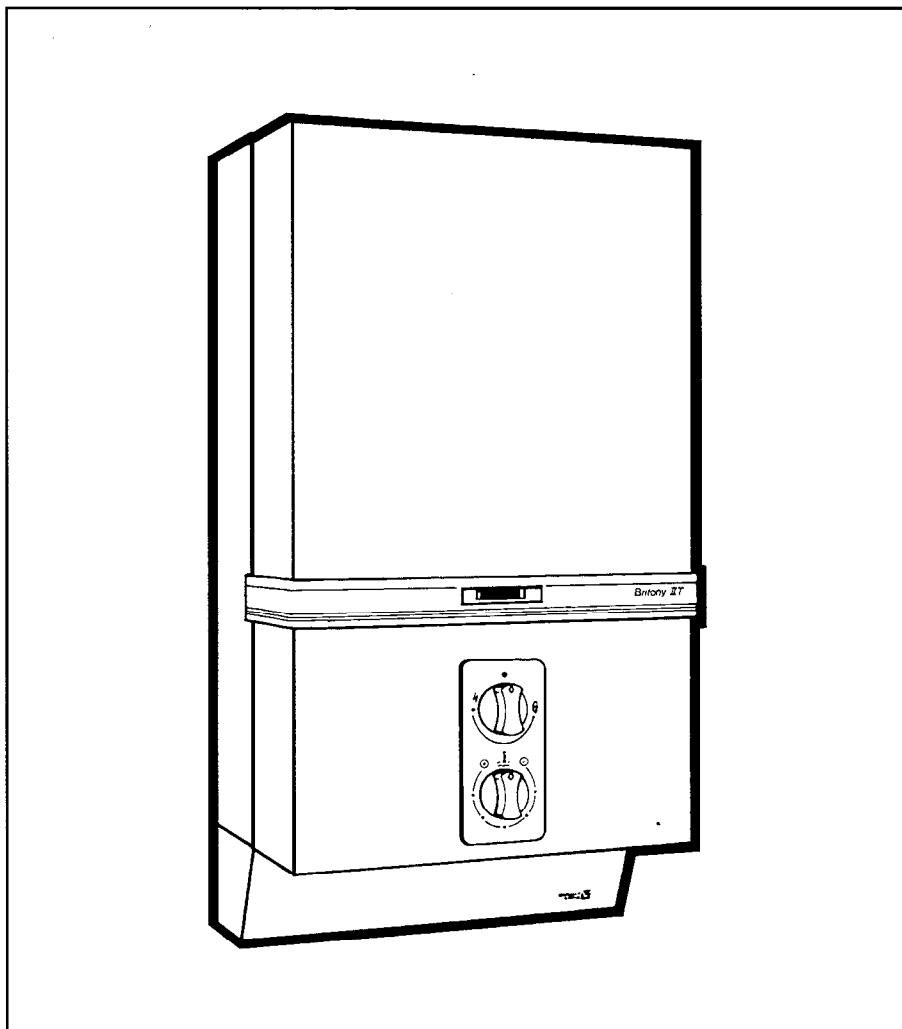
## **GAS SAFETY (INSTALLATION AND USE) REGULATIONS.**

It is the law that all gas appliances are installed by a competent person  
in accordance with the above regulations.

BRITONY II.T NAT G.C. N° 52 980 18

BRITONY II.T LPG G.C. N° 52 980 23

from serial number 894216759-03



## **installation and servicing instructions**

(leave these instructions with the user)

The model number and serial number of this heater are on the data badge which is found inside rear case at lower left hand side.  
These numbers should be used when ordering replacement parts.

**CONFORMS WITH EUROPEAN STANDARD EN.26**



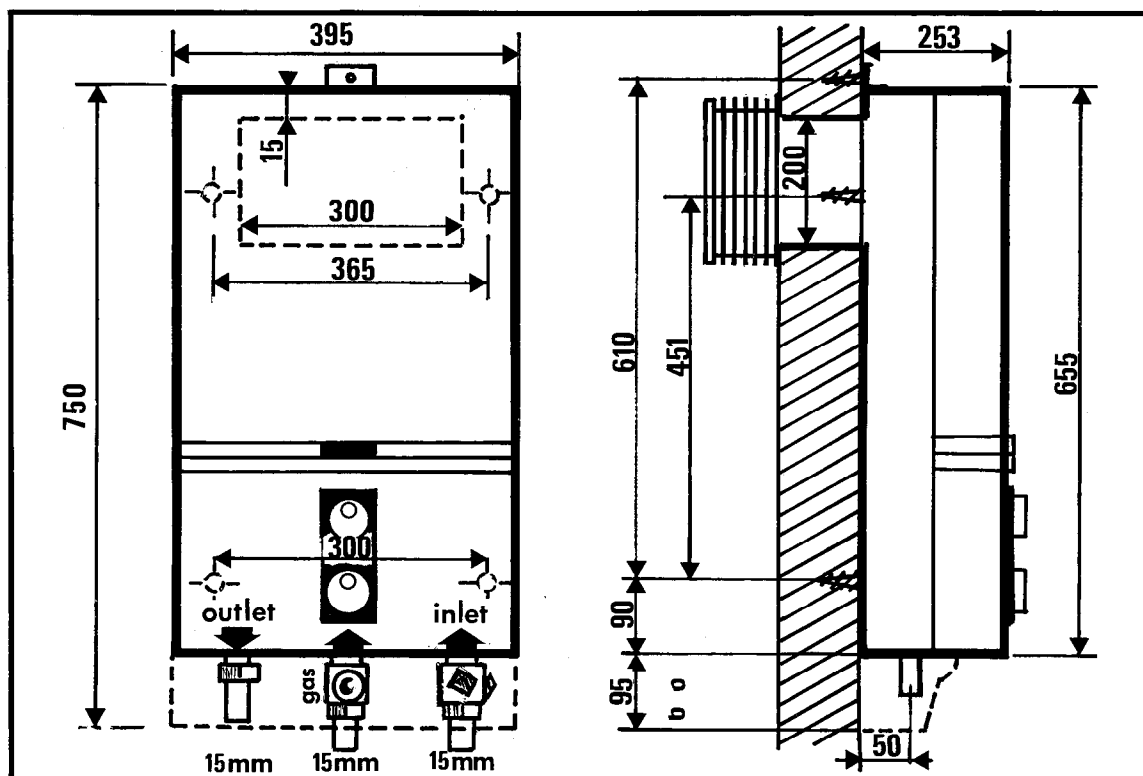
**Chaffoteaux  
et Maury**



Looking Good.Heating Better

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## GENERAL

The BRITONY II T is a cat. II2H3+ appliance

9124535.02 BRITONY II T NAT GC N° 52 980 18

9124525.02 BRITONY II T LPG GC N° 52 980 23

The BRITONY II T is a balanced flue instantaneous gas fired multipoint water heater. For direct connection to the mains cold water supply.

The BRITONY II T does not require any purpose provides ventilation unless installed in a compartment. A compartment enclosing the heater requires high and low level openings communicating with outside air or the room in which the compartment is located. The free area of these openings must be :

	High Level	Low Level
Air from room	252 cm <sup>2</sup> (40 in <sup>2</sup> )	252 cm <sup>2</sup> (40 in <sup>2</sup> )
Air from outside	126 cm <sup>2</sup> (20 in <sup>2</sup> )	126 cm <sup>2</sup> (20 in <sup>2</sup> )

The installation of the heater must be in accordance with the relevant requirements of the Gas Safety Regulations, Buildings Regulations and the Bye-laws of the local Water Undertaking. It should also be in accordance with any relevant requirements of BRITISH GAS and local authority and the relevant recommendations of the following British Standard Codes of Practice.

- BS 5440 Flues and air supply for gas appliances of rated input not exceeding 60 kW (1st and 2nd family gases)  
Part 1 - Flues  
Part 2 - Air Supply
- BS 5546 Code of practise for installation of gas hot water supplies for domestic purposes (2nd family gases)
- BS 6891 Specification for installation of low pressure gas pipework of up to 28 mm (R1) in domestic premises (2nd family gas)

# technical data

**TABLE 1**

Heat input Nominal .....	23 kW - 78,480 Btu/h
Heat output Nominal .....	21 kW - 71,650 Btu/h
Gas rate (maximum) :	
• Natural gas (G 20) .....	2.43 m <sup>3</sup> /h - 88.1 ft <sup>3</sup> /h
• Butan (G 30) .....	1.81 kg/h
• Propan (G 31) .....	1.79 kg/h
Burner pressure (G 20) .....	11.6 mbar - 4.5 in w.g
Main burner injectors marking :	
• Natural gas (restrictor ø 5.2) .....	1.18
• Butan - propan .....	0.70
Pilot injector marking :	
• Natural gas .....	0.23
• Butan - propan .....	0.15
Water flow rate - raised 50° C (90° F) .....	6 l/m - 1.32 g.p.m.
Water flow rate - raised 30° C (54° F) .....	10.05 l/m - 2.21 g.p.m.
Minimum water pressure .....	1 Bar - 15 P.S.I.
Maximum water pressure .....	10 Bar - 150 P.S.I.
Water inlet - right hand connection .....	15 mm copper
Water outlet - left hand connection .....	15 mm copper
Gas - centre connection .....	15 mm copper
Height .....	655 mm
Width .....	395 mm
Depth .....	253 mm
Weight .....	19 kg
Space for fixing - Top .....	65 mm
Space for fixing - Bottom .....	178 mm
Space for fixing - Sides .....	25 mm
Space for fixing - Front .....	152 mm
<b>HOLE FOR WALL LINER</b>	
Width .....	305 mm
Height .....	205 mm
<b>WALL THICKNESS</b>	
Standard flue set .....	75 - 355 mm
Optional flue set .....	75 - 500 mm

The minimum water pressure is for the correct operation of the heater only. An additional allowance must be made for the resistance of the pipework and fittings particularly where showers and washing machines are used. This should be the equivalent of 2 m (6.5 ft.) head.

# installation

The BRITONY II T is supplied in two cartons, one containing the heater, the other containing the balanced flue set.

## INSTALLING THE BALANCED FLUE

The standard flue set is suitable for walls having a thickness of 75 mm (3 in) to 355 mm (14 in). An optional flue set for wall thicknesses up to 500 mm (20 in) is available to special order. Detailed recommendations for flueing are given in BS 5440 :

1. The following notes are for general guidance only.  
The heater must be installed so that the flue terminal is exposed to the external air. The heater must not be installed so that the terminal discharges into another room or space such as an outhouse or lean-to.

Termination should be on a clear expanse of wall, the terminal preferably being not less than 300 mm (1 ft.) away from a corner recess or projection.

**DO NOT** install the terminal :

- a) within 300 mm (1 ft.) measured vertically from the bottom of an openable window, air vent or any other ventilation opening.
- b) within 300 mm (1ft.) above adjacent ground level.
- c) within 600 mm (1 ft.) of any surface facing the terminal.
- d) immediately beneath eaves or a balcony.

Where the lowest part of the terminal is less than 2 m ( 6,5 ft.) above the level of any ground, balcony, flat roof or place to which any person has access, and which adjoins the wall in which the terminal is situated, the terminal must be protected by a guard of durable material. (A terminal guard is available from QUINNELL BARRETT & QUINNELL, 071 639 1357.

The air inlet, product outlets duct or terminal of the heater must not be closer than 50 mm (2 in) to any combustible material. Detailed recommendations on the protection of combustible material are given in BS 5440 : 1

## PREPARING THE WALL

The heater should be installed on a wall of flat non- combustible material that will not reverberate. Whatever the thickness of the wall, make a hole 305 mm (12 in) wide by 205 mm (8 in) high. If the hole is cut accurately there is no need to line it as the wall liner will seal off the cavity.

A minimum clearance of 80 mm (3,2 in) should be left above the top edge of the wall opening. For dimensions and clearance see page 2 and Technical Data, page 3.

Slide the wall liner through the wall ensuring that is horizontal and that the flanged end is flush with the face of the inside wall. Trim to length if necessary, so that the outer end of the duct is flush with the face of the outside wall. Make good around the wall liner if necessary (fig. 1).

N.B. : For walls of between 75-100 mm (3-4 in), turn the wall liner hooks down through 90°.

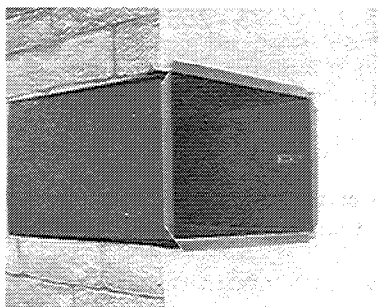


Fig. 1

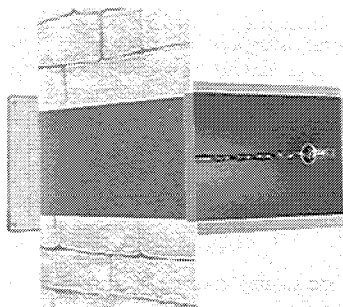


Fig. 2

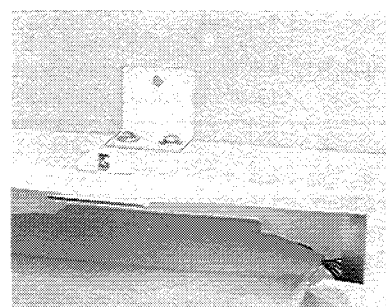


Fig. 3

## FITTING THE FLUE TERMINAL

### Wall Liner

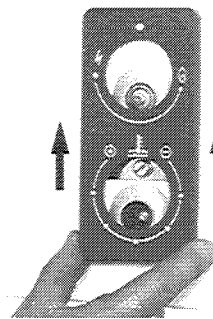
- For walls of 14 ins. (355 mm) or less, use only the flanged wall liner section, measure and cut to length so that the liner extend 1/4 in. from external wall face. Cut "U" cover section to length.
- Assemble by inserting the tabs on the "U" shaped section into the slots on the cover.
- Turn the tabs over in the direction of the lip on the cover, fit hooks with nuts and bolts provided.
- Refit liner into hole and cement into position for a weather proof finish.
- Ensure that the wall liner is horizontal.
- For walls of over 14 in. assemble the telescopic extension piece in the same manner as the flanged section.
- Insert inside the flanged section and extend until it extends 1/4 in. from external wall face, mark around inside of flanged section.
- Remove liner and extension, cut off surplus from extension leaving a minimum 2 in. overlap making sure extension does not obscure hooks.
- Re-assemble liner and extension, seal around outside of joint with tape supplied.
- Re-fit liner into hole.
- Cement in position for a weather-proof finish.
- Ensure that the liner is horizontal.

**N.B. :** For walls 3 in. - 4 in. (75 mm - 100 mm) do not use the hooks but fit the chains into the slots in the bend fixing brackets.

### Flue Duct

For the standard flue set the duct is telescopic and should be adjusted to length to ensure that it fully engages with the terminal and the flue bend. The joint should be sealed with the tape supplied.

For walls over 14 in. fit additional telescopic extension piece (total 3 pieces) ensuring a 2 in. overlap. Seal the joint with the tape provided.



# installation

## INSTALLATING THE HEATER

The heater is attached to the wall by 2 studs at the top and two screws at the bottom. A further optional top fixing is provided for installations where the wall adjacent to the top fixing holes is of less than sound construction. The fixing studs, screws and optional top bracket are packed with the gas service tap and a foam gasket and placed in a box which is found inside the carton.

Remove the front case of heater by pulling off gas control/temperature control knobs, slide fascia plate upwards to expose case fixing screw, and unscrewing the three fixing screws at the top case taking care not to lose the rubber spacer behind the centre fixing screw.

Remove the flue bend from the top of the heat exchanger by releasing the fixing clip and removing the two screws.

**N.B. :** If the optional top fixing bracket is to be spigot of the appliance in the wall liner, check that the appliance is vertical and mark the four or five fixing holes. Drill and plug the wall and fasten the top studs in position. These studs can be screwed into the wall by locking two nuts together on the parallel thread and using a spanner.

Attach the self adhesive foam gasket to the flat surface of the heater around the air inlet spigot of the rear case. Remove the protective paper while sticking down the gasket. Lift the heater into position on the wall, locating on the studs and the wall liner. Secure the heater to the wall using the nuts and screws provided. The hooks fit under the nuts of the top fixing studs (fig. 4).

Transfer the terminal fixing chains from the wall liner to these hoods. The terminal chains should not be left fixed to the wall liner hooks.

Slide the flue duct through the rectangular hole in the rear case and engage into the central spigot of the terminal so that it touches the two end stops. Refit the flue bend so that the flue duct engages by at least 25 mm (1 in), it may be necessary to cut the flue duct to the correct length, and ensure that the flue bend is seated correctly on the heat exchanger with the gasket in place. Replace the two screws and clip securing the flue bend.

Do not refit the front cover until the appliance has been commissioned.

## GAS CONNECTION

Fit the gas service tap provided using the fine filter washer to seal the connection. Fit the 15 mm dia. copper tail nut and washer provided to the inlet of the gas service tap and connect this to the gas supply.

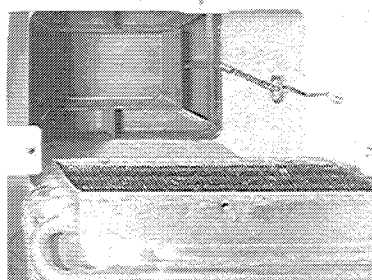


Fig. 4

The size of the gas supply pipe from the meter to the heater only should be as follows.

Distance from Meter outlet to heater	Gas Supply
0-3 m (0-10ft.)	15 mm
3-20 m (10-65 ft.)	22 mm

The sizes are for the heater only and do not take account of any other gas appliances that may be connected to the same gas service pipework.

## WATER CONNECTIONS

Remove the plastic covers protecting the water inlet and outlet connections.

Fit the water service tap provided to the right hand connection at the bottom of heater using the coarse filter washer to seal the connection.

Fit the washers provided to the inlet of the water service tap and to the outlet of the heater (left hand connection).

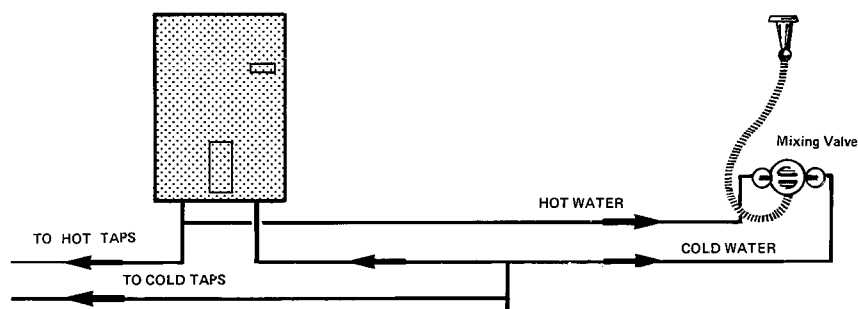
The water service tap supplied with the heater incorporates a drain plug.

## APPLICATIONS OF THE BRITONY II T

The heater is designed to serve a variety of hot water draw-off points including washing machines and showers. The heater can be connected to all the hot water draw-off points in the installation. If more than one outlet is open simultaneously the total flow of water cannot exceed that quoted in the Technical data.

The heater is compatible with most current automatic washing machines, but care should be taken to ensure that the machine is capable of accepting water at the design flow rate of the heater. Hot and cold fill machines normally require a hot water temperature of 60° C (140° F), the heater producing approximately 6,5 l/m (1,44 g.p.m.) at this temperature. The advice of the washing machine manufacturers should be sought, but generally it is only necessary to remove the water inlet connection of the machine to obtain a satisfactory heater operation.

Chaffoteaux do not recommend the use of a bath/shower type mixing valve with the Britony range of water heaters. It has been found that the characteristics of these type of fittings are such that a coarse and unsatisfactory shower results.



# installation

Contact Chaffoteaux Limited for details of those machines known to be compatible with the BRITONY II T.

The heater can be used to supply hot water to a separate shower draw-off. The heater should not be used to supply more than one shower mixing valve, but can supply two shower heads off a single shower head as shown in fig. 5. Only those fittings detailed should be used with the heater. Chaffoteaux Limited do not supply the water governor or any shower fittings. For local supplies of these please contact :

## **Water governor :**

Dereve (Flow Controls) Limited  
Park Lane  
HANDSWORTH  
Birmingham B 21 8LE 0121 5537 021

## **Shower Accessories :**

Caradon Mira Ltd  
Cromwell Road  
Cheltenham  
Gloucester GL52 5EP  
Tel : 01242 27953

## **Barking Grohe :**

1 River Road  
Barking  
Essex IG11 0HD  
Tel : 0181-594-8898

## **Meynell Valves Ltd :**

Shaw Road,  
Bushbury,  
Wolverhampton,  
West Midlands WV109LB  
Tel : 01902 28621

## **Aqualisa Products Ltd :**

Horton's Way  
London Road  
Westerham  
Kent TN 16 1BT  
Tel : 01959 63240

## **New Team Ltd :**

Brunell Road  
Earlstree Ind. Estate  
Corby  
Northants NN17 2 LF  
Tel : 01536 62822

Do not use the heater with push-on hand showers that fit over existing hot and cold water taps.

## **PIPEWORK**

The following notes are for general guidance only.

- (I) The heater's performance may be affected if the installation has old pipework forming dead-legs or air reservoirs.  
Always ensure that any old pipework is either removed or capped off immediately adjacent to the pipework that will be in use.
- (II) The size of pipework between the heater and the various draw-off points should be sized to ensure an adequate flow at all draw-offs when used individually.

(III) A check should be made of all stop cocks in the incoming supply and it should be ensured that they are of the fixed jumper pattern. Loose jumpers can be pinned or soldered into position.

(IV) If the appliance is installed on a supply or distribution pipe containing a non-return valve, combinations of check valve, or any equipment containing such devices, then provision must be made to accommodate an expansion of at least 4 % of the volume of water contained within the installation.

(V) Expansion vessels must be fitted on the supply pipe between the non-return valve, combinations of check valve, or any equipment containing such devices, and the appliance.

## **PUTTING INTO SERVICE**

### **Remove protective film before use**

Open the gas and water service taps beneath the appliance. Purge the gas and water supplies. Check for gas and water soundness at all heater and external pipework connections. Fit the gas control knob and light the pilot by turning the knob 90° anti-clockwise. It may be necessary to purge the pilot gas supply, if so, wait a few moments, return the gas control knob to the off position and repeat (the pilot supply will only purge when the gas control knob has been turned 90° anti-clockwise).

Turn the gas control knob fully anti-clockwise to the main gas position. If the pilot is now extinguished for any reason, return the gas control knob to the safety interlock to reset itself. Turn on an adjacent water draw-off point, the heater will now light.

Check the burner pressure by fitting a suitable gauge to the pressure test point on the end of the burner manifold. The correct pressure is given in Table 1 page 3. If the burner pressure is not correct, check that the pressure at the gas tap test point is 20 mbar (8 ins w.g.) with the appliance operating. If the inlet pressure is not correct, check for any possible blockage or restriction in the corrected contact your local gas region. The heat input to the heater is preset and non-adjustable.

### **Remove the gas control knob**

Replace the front cover ensuring that the rubber spacer is in place behind the centre fixing screw, slide fascia plate down, replace the gas control knob and temperature control knob ensuring that the knob indicates «hot» when turned fully clockwise.

Hand the User's Instructions to the consumer and instruct in the correct and safe operation of the heater.

## **DRAINING THE HEATER**

If the heater is not to be used for long periods it is recommended that it be drained. See the Servicing Instructions for how to drain the heater.

# servicing instructions

Before commencing any servicing work, turn off the gas and water at the gas and water inlet taps on the appliance. Slide the bottom plastic trim forward to improve access

## ROUTINE SERVICING

To ensure continued efficient and safe operation of the appliance it is recommended that it is checked and serviced as necessary at regular intervals. The frequency of servicing will depend upon the particular installation condition and usage, but in general once a year should be adequate. It is the law that any service work must be carried out by a competent person such as British Gas, other C.O.R.G.I. registered personnel or your local Chaffoteaux Service Centre, in accordance with the Gas Safety (Installation and Use) Regulations. This routine service will normally be confined to :

- 1) Cleaning the burner, and pilot tube.
- 2) Cleaning the heat exchanger, and thermocouple.
- 3) Checking the gas controls.
- 4) Cleaning water filter, and water governor.
- 5) Check diaphragm and replace every 3 years.

The following schedules are recommended :

- a) Check the function of appliance, burner pressure, gas flow rate and soundness.
- b) Observe flame picture and undertake combustion test.
- c) Check, clean or replace components as necessary.

## 1) FRONT CASING

To remove, pull off the gas control and temperature control knob.

Slide fascia plate upward to allow access to centre fixing screws.

Unscrew the top, centre and bottom fixing screws.

Pull off the case taking care not to lose the rubber spacer behind the centre fixing point.

## 2) BURNER

Unscrew the pilot tube clamping screw (A - fig. 7) and remove the clamp and tube.

Remove the burner manifold by unscrewing the two screws (B - fig. 7).

Pull burner head assembly forward to remove, taking care not to trap the thermocouple or ignitor wires.

The burner head should be turned upside down and cleaned by brushing.

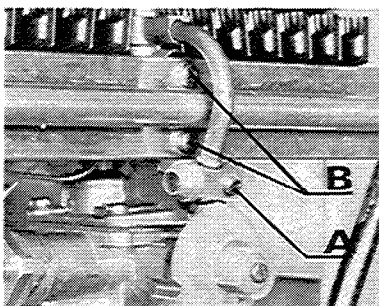


Fig. 7

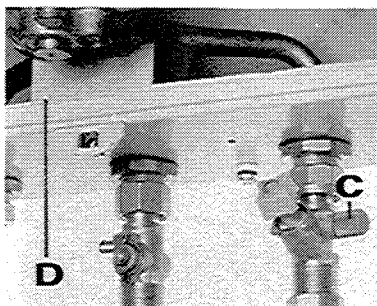


Fig. 8

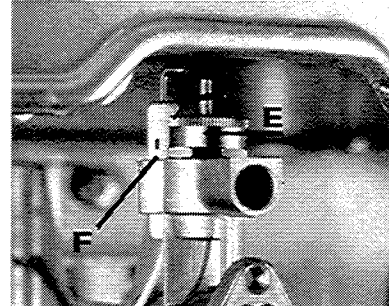


Fig. 9

Replace in reverse order making sure that the gasket between the burner manifold and gas section is in place and that the burner head assembly is correctly located on the two spigots at the rear.

## 3) HEATING BODY

Remove the flue bend from the top of the heat exchanger by removing the clip and the two fixing screws. Lift the flue bend off the heat exchanger taking care not to damage the sealing gasket. The heating body can be examined in position and if external cleaning is sufficient, remove the burner and clean the heat exchanger with a soft brush, detergent and the hot water.

To remove the heating body for further cleaning, the heater must first be drained.

Turn off the water inlet tap to the appliance as before and open an adjacent hot water draw-off point. Remove the drain plug from the side of the water inlet tap (C - fig. 8) and drain the water from the heater. Alternatively remove the water governor plug (D - fig. 8) from the base of the water section and drain the water governor plug before proceeding.

Remove the burner (see section 2).

Remove the screw holding the bottom of the heating bodyskirt to the rear case.

Release the two union nuts on the heating body legs.

Remove the heating body.

In hard water areas it may be necessary to descale the heating body. Use a solution consisting of 5 parts water to 1 part hydrochloric acid. The water should preferably be hot - ADD ACID TO WATER, NOT WATER TO ACID.

Fill the heating body solution and leave until the solution stops bubbling. Flush out the heating body thoroughly before refitting to the heater.

**WARNING - ACID/WATER SOLUTIONS MUST BE USED WITH EXTREME CAUTION. TAKE CARE NOT TO SPLASH THE SOLUTION ONTO SKIN OR INTO THE EYES. WASH ANY AREAS AFFECTED WITH LARGE AMOUNTS OF COLD WATER AND SEEK MEDICAL ADVICE.**

# servicing instructions

Re-assemble in reverse order ensuring that the skirt fixing screw and reinforcing strip are in place.

## 4) PILOT

Unscrew the pilot tube clamping screw (A - fig. 7) and remove the clamp and tube.

Blow through the tube to remove any dust.

Remove the burner (see section 2)

Unscrew the knurled pilot burner outer ring (E - fig. 9).

Lift off flame retention gauze.

Unscrew the pilot body (F - fig. 9), with a 15 mm spanner. Clean by blowing or washing in water. Do not clean the holes with a wire.

Blow any dust out of the gas section.

Re-assemble in reverse order.

## 5) THERMOCOUPLE

Remove the burner (see section 2).

Remove the pilot (see section 4).

Unscrew the thermocouple nut (G - fig. 10) from the thermo-electric valve and remove it from the wire.

With a 7 mm box panner, unscrew the nut (H - fig. 11) holding the thermocouple into the gas section.

Thread the thermocouple and wire up through the gas section.

Replace in reverse order.

## 6) SPARK ELECTRODE

Remove the burner (see section 2).

Remove the electrode fixing screw (J - fig. 11) with a screw-driver placed inside the heating body skirt.

Pull off the electrode cable from the piezo cartridge.

Lift the electrode out of the gas section.

Re-assemble in reverse order, and note that the slot in the connector on the end electrode cable is vertical when pushed onto the cartridge.

## 7) THERMO-ELECTRIC VALVE

To replace, remove the thermocouple nut (G - fig. 10).

Unscrew cap from the side of the gas section and withdraw the thermo-electric valve.

**NOTE :** This heater is fitted with a safety interlock. When the pilot is turned off, the heater can not be relit until the thermocouple cools down and the lighting sequence is repeated.

## 8) MAIN GAS VALVE

To inspect and clean, remove the burner (see section 2).

Disconnect the thermocouple and ignitor lead (see section 5 and 6).

Remove the four screws fastening the top of the gas section to the base (K - fig. 12) and the two screws at the back (L - fig. 12), holding it to the rear case.

Lift the gas section top off the base.

Remove the complete gas valve assembly by unscrewing the brass cylinder that two flats.

Dismantle the gas valve assembly by unscrewing the hexagonal spring retainer from the top of the assembly. Remove the spring and gas valve and clean the valve seating.

Replace the gas valve facing rubber and gas valve assembly "O" ring if necessary.

Replace in reverse order, ensuring that the hexagonal spring retaining nut is screwed fully down and the whole assembly is screwed fully down into the gas section.

## 9) DIAPHRAGM

To replace, turn off the cold water supply and gas.

Drain the heater by removing the water governor plug situated in the base of the water section.

Unscrew the four water unions (M - fig. 13) on the water section.

Unscrew the six screws (N - fig. 13) holding the water section to the gas section.

Remove the water section complete with the diaphragm.

Replace in reverse order - NOTE - fit the water governor last. It is easier if the cold water inlet connection is partially engaged before fitting the screws and reconnecting the union nuts.

## 10) WATER GOVERNOR

To clean, turn off the cold water supply to the heater.

Remove the governor situated in the base of the water section (O - fig. 14).

Clean the components with water.

Check that the spring loaded piston moves freely.

Replace in reverse order.

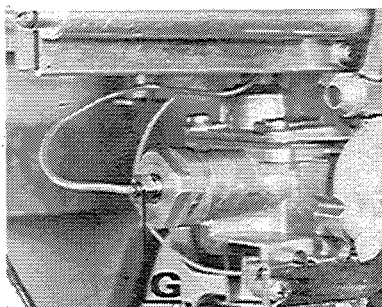


Fig. 10

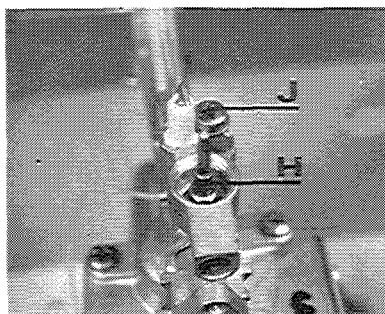


Fig. 11

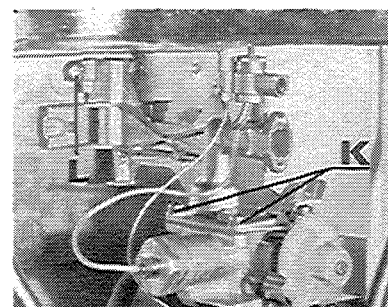


Fig. 12



# servicing instructions

## 11) GAS AND WATER FILTERS

Gas and water inlet are fitted between the inlet taps and the heater.

To clean, turn off the taps, unscrew the union nuts attaching the taps to the heater, and remove the filters.

Clean the filters by blowing or washing in water. DO NOT use any solvents.

Replace ensuring that the coarse filter is fitted in the water inlet and the fine filter in the gas inlet.

## 12) PIEZO CARTRIDGE

Pull off the electrode from the piezo cartridge.

Remove the screw holding the gas control cam and remove the cam (P - fig. 15).

Remove the two screws (Q - fig. 15) holding the retaining plate.

Remove the piezo cartridge and replace if necessary.

## 13) HEAT INPUT

The heat input is pre-set and non-adjustable. The heat input and burner pressure should be checked against Table 1.

If the heat input/burner pressure is not correct, check the working pressure at the pressure test point on the gas service tap. This should be 20 mbar (8 ins w.g.).

The gas installation should be examined for any possible blockage if the pressure is incorrect.

## 14) WATER SECTION VENTURI

Drain the heater as in Section 3.

Disconnect the right hand heating body leg at the water section and remove the venturi.

Clean or replace as necessary and re-assemble in reverse order.

## 15) SLOW IGNITION DEVICE

Burner ignition should be smooth and quiet. Incorrect adjustment of the slow ignition screw can cause explosive ignition or ignition at all. To adjust the slow ignition device firstly tighten screw (S - fig. 14) fully then unscrew 1/4 turn at a time until the appliance ignites smoothly.

Note : Turning the screw (S) clockwise delays ignition.

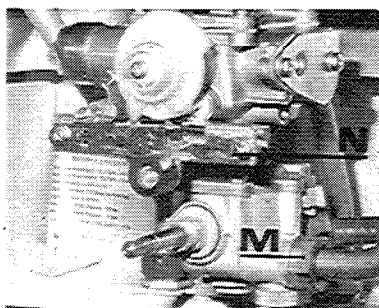


Fig. 13

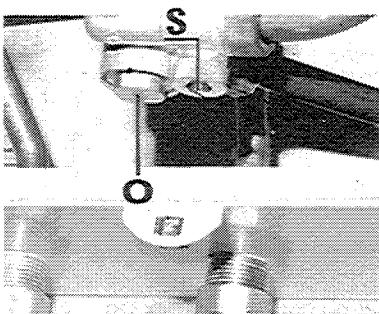


Fig. 14

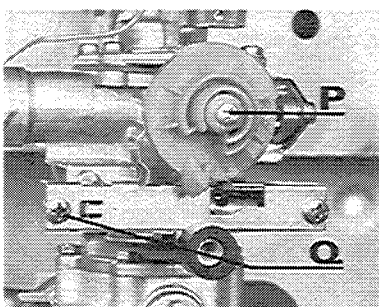


Fig. 15

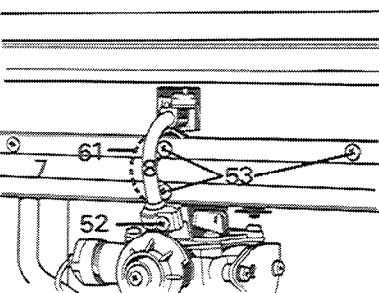


Fig. 16

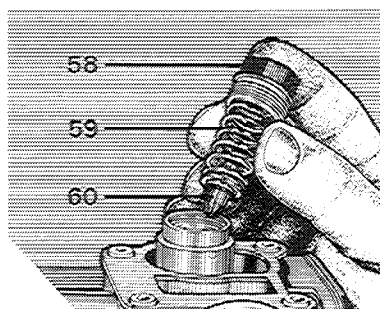


Fig. 18

## 16) GAS CONVERSION

From natural gas to butan-propan and vice-versa (fig. 16, 17, 18).

- Turn off gas at the gas service cock and remove the front casing (see section 1, front casing, p. 7).
- Unscrew the pilot tube clamping screw (52) and remove pilot tube (8).
- Remove the burner manifold (7) by unscrewing the four screws (53).
- Disconnect at thermo-electric valve by undoing nut (54) and pull off the electrode cable (55).
- Unscrew the two screws (56) and pull burner forward to remove.
- Unscrew the four screws (57) and lift the gas section top off the base.
- Unscrew the spring retainer (58).
- Remove spring (59) and change the main gas valve (60).
- Replace the spring (59) and screw fully down the spring retainer (58).
- Replace the gas section top on the base and screw the four screws (57).
- Replace the burner and screw the 2 screws (56).
- Re-assemble the thermo-couple nut (54) and electrode cable (55).
- Change the pilot gasket (61) change the pilot injector.
- Replace the new burner manifold with the appropriate injectors and the manifold restrictor (if planned). Fasten the four screws (53).
- Replace the pilot tube (8) conform with the new used gas and gently tighten the screw (52).

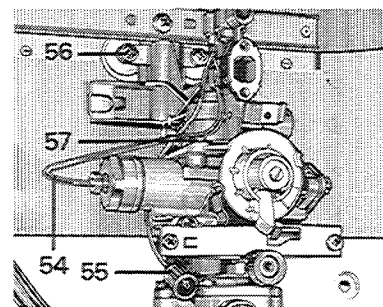


Fig. 17

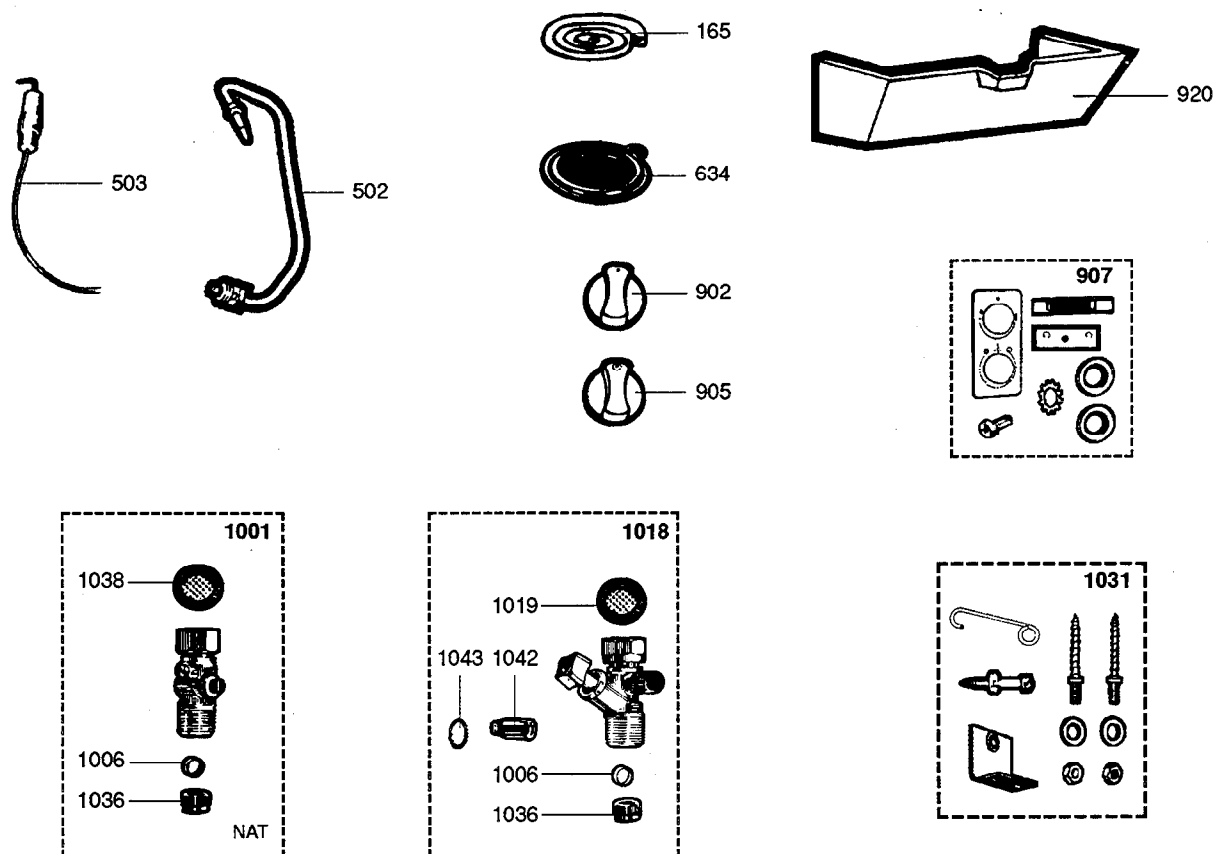
## FAULT FINDING CHART FOR BRITONY II T

PROBLEM	CAUSE	REMEDY
<b>LOW WATER TEMPERATURE</b>	<b>I)</b> Insufficient gas flow <b>II)</b> Water governor sticking <b>III)</b> Incorrect venturi <b>IV)</b> No venturi fitted	Check rate and user's tap is open  Remove and clean or replace  Replace (3.65 mm)  Fit
<b>BURNER STAYS ON</b>	<b>I)</b> Air in pipework <b>II)</b> Gas valve stays open <b>III)</b> Venturi blocked <b>IV)</b> Dirt on gas valve facing <b>V)</b> Loose jumper on house stop cock tap <b>VI)</b> Dirt foreign matter in water section <b>VII)</b> Slow ignition device stuck	Check for "dead-legs"  Clean and grease gas spindle  Remove and clean  Strip and clean gas valve  Replace water stop tap or pin down jumper  Clean water section  Clean and adjust (see page 4)
<b>YELLOW FLAMES SOOT FORMED</b>	<b>I)</b> Heating body fins blocked <b>II)</b> Primary air supply restricted <b>III)</b> Wrong injectors	Remove heating body and clean  Check burner manifold and clean  Replace manifold
<b>UNSTABLE FLAMES</b>	<b>I)</b> Water in gas line <b>II)</b> Faulty flue	Purge  Check terminal position and flue ducts
<b>HEATING BODY NOISE</b>	<b>I)</b> Scale <b>II)</b> Excessive gas <b>III)</b> Insufficient water flow	Descale heating body  Check gas pressure (see page 3)  See below
<b>INSUFFICIENT WATER FLOW</b>	<b>I)</b> Water service tap partly closed <b>II)</b> Blocked venturi <b>III)</b> Low water pressure <b>IV)</b> Water governor faulty <b>V)</b> Water governor sticking <b>VI)</b> Foreign matter in water section	Check it is fully opened  Remove and clean venturi  Check water pressure  Change governor  Remove and clean or replace  Remove and clean

## FAULT FINDING CHART FOR BRITONY II T

PROBLEM	CAUSE	REMEDY
<b>PILOT FLAME DOES NOT LIGHT</b>	<b>I)</b> Gas service tap closed <b>II)</b> Air in pipe <b>III)</b> Pilot injector blocked <b>IV)</b> No ignition spark	Open service tap Purge line Clean or change Check electrode, lead and ignitor
<b>POOR PILOT FLAME</b>	<b>I)</b> Pilot injector dirty/damaged <b>II)</b> Wrong injector <b>III)</b> Pilot head blocked <b>IV)</b> Faulty pilot tube	Clean or change change for correct diameter (see Table 1) Clean Clean or replace
<b>PILOT WILL NOT STAY ALIGHT</b>	<b>I)</b> Thermocouple not working <b>II)</b> Thermo-electric valve faulty <b>III)</b> Gas pressure low/variable <b>IV)</b> Terminal wrongly positioned <b>V)</b> Badly assembled flue <b>VI)</b> Gas pressure too high	Change thermocouple Change valve Check at inlet to heater (see page 3) Re-position heater (see page 4) Refit-check sealing Check with British Gas
<b>MAIN BURNER DOES NOT LIGHT</b>	<b>I)</b> Gas service tap not open fully <b>II)</b> Gas pressure low <b>III)</b> Water rate low <b>IV)</b> Gas valve not opening <b>V)</b> Diaphragm punctured <b>VI)</b> Venturi blocked or loose <b>VII)</b> Gas control tap faulty <b>VIII)</b> Wrong injector <b>IX)</b> Slow ignition device stuck or wrongly adjusted	Open fully Check at manifold and at inlet with heater Check if water rate is sufficient (see page 3) Check (V) and (VI) Change diaphragm Check venturi Check operation of User's gas control tap Check for correct diameter (see Table 1) Clean or adjust (see page 9)
<b>EXPLOSIVE IGNITION</b>	<b>I)</b> Pilot <b>II)</b> Slow ignition device stuck or wrongly adjusted	Check pilot tube and injector Clean or adjust (see page 9)
<b>GAS CONTROL TAP STIFF (USER'S)</b>	<b>I)</b> Grease dried <b>II)</b> Operating mechanism replaced incorrectly	Clean and regrease Refit

# SHORT LIST



Key	Description	Type	G. C. NO.	MANF. PT. NO. BRITONY IIT	
165	FOAM SEAL 25x12 L: 1,030M .....	NAT	366032	26773.00	A5086 P03 R09
502	THERMOCOUPLE .....		387251	35087.00	
503	ELECTRODE AND LEAD ASSEMBLY .....		387252	60703.00	
634	DIAPHRAGM .....		263432	25809.30	
902	GAS CONTROL KNOB .....		264487	74469.00	
905	TEMPERATURE SELECTOR KNOB .....		264488	74470.00	
907	FRONT CASE TRIMS .....		264888	81172.00	
920	BOTTOM TRIM .....		264490	74473.00	
1001	GAS SERVICE TAP ASSEMBLY .....		265158	81288.00	
1006	OLIVE .....		263800	56489.00	
1018	WATER SERVICE TAP ASSEMBLY .....		263794	81289.00	
1019	WATER FILTER .....		263589	1007727.00	
1031	FIXING ASSEMBLY .....		265160	81404.00	
1036	NUT 1/2" .....		263801	56490.00	
1038	GAS FILTER .....		263545	37309.00	
1042	DRAIN PLUG .....		263617	41197.00	
1043	"O" RING D: 7.2-1.9 .....		262806	24164.12	

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