

## **WARNING**

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# The Rayburn Prince 76.



The comfort of an open fire and the economy of a room heater.



Burning as an open fire.



In the intermediate position.

This is the heater designed for inflationary times because it burns low cost coal efficiently. So much so that it's fully approved for use in smoke control areas.

The Rayburn Prince 76 lets people control the amount of heat they need (and therefore their running costs), by offering the choice of three burning rates.

It can be that most desirable of all heat sources—a real open fire, burning efficiently—a living fire—heating the room, supplying domestic hot water and with enough power to heat up to 6 radiators.

Or if at times the full heat output is not required when burning as an open fire, the lowering of the closure plate to the intermediate burning position will approximately halve the output of both direct heat and hot water. Giving a corresponding saving on fuel.

Finally by simply lowering the closure plate to the closed position, the open fire becomes a room heater. Burning now at the most economical rate, idling for up to ten hours and often more, there is still sufficient heat to prevent the room getting cold and to produce hot water.

### Recommended Fuels

Bituminous Coal in Doubles, Nuts, Trebles or Large Nut sizes as specified by the National Coal Board.

### Installation

Installation with minimum structural alteration (see separate technical leaflet). General dimensions 23½" wide x 25" high x 3½" projection on to hearth, and requiring a 16" deep opening from the wall line or face of the tile surround. If a tile surround is necessary to give this depth, it should be 2½" to 4" thick with a fire opening 22" wide x 24" high.

### Standard Fittings

The Rayburn Prince 76 is supplied with an Ash Tidy, Poker/Raker, and a Flue brush.

### Extras Available

Length of 6" diameter cast-iron flue pipe.

### Colours

Top and side panels standard in Pewter. Innerside panels and glass panelled front frame are chromium plated. Removable canopy and ashpit fascia panel are available in Fawn, Alisheen Copper, Tan and Pewter.

| Ratings                                                                                     |                | Open fire burning   | Inter-mediate burning              |
|---------------------------------------------------------------------------------------------|----------------|---------------------|------------------------------------|
| Space heating                                                                               | Btu/h<br>kW    | 9,000<br>2.7        | 4,000<br>1.2                       |
| Water heating                                                                               | Btu/h<br>kW    | 26,500<br>7.7       | 16,000<br>4.7                      |
| Capability                                                                                  |                |                     |                                    |
| Boiler Capacity                                                                             | gals<br>litres | 1.94<br>8.81        |                                    |
| Hot Water Cylinder Capacity                                                                 | gals<br>litres | 30 min.<br>140 min. | Must be indirect double feed type. |
| Radiation surface including unlagged pipes and 30 gallon indirect cylinder                  | ft²<br>m²      | Max.<br>135<br>12.5 | Min.<br>110<br>10.2                |
| Maximum room size                                                                           | ft³<br>m³      | 1500<br>42.5        |                                    |
| It is recommended that in rooms more than 1000ft³ (28.3m³) a back up radiator is installed. |                |                     |                                    |

The area of radiator surface including pipework quoted is based on an average heat emission of 160 Btu/ft²/h (0.5kW/m²). Patent pending.

\* Double feed INDIRECT CYLINDERS to BS1566: Pt. 1: DF: Ref Type 8-140 litres capacity only are recommended.

*The makers reserve the right to make alterations to design, materials or construction, for manufacturing or other reasons, subsequent to publication. The word Rayburn is a registered trade mark.*

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**Rayburn**  
**GLYNWED**

# Rayburn Prince 76

## Installation instructions

### Health & Safety at Work Act 1974

As manufacturers and suppliers of cooking and heating products, in compliance with Section 6 of Health and Safety at Work Act 1974, we take every care to ensure as far as is reasonably practicable that these products are so designed and constructed as to be safe and without risks to health when properly used and installed. To this end our products are thoroughly tested and examined before despatch.

### Ratings

|                      |        |              |
|----------------------|--------|--------------|
| Direct Space Heating | 2.7 kW | 9,000 Btu/h  |
| Water Heating        | 7.7 kW | 26,500 Btu/h |

### Performance

Direct Space Heating - room of normal construction. (SEE NOTE 8 UNDER CONNECTIONS AND PIPEWORK)

|                                                       |                          |                    |
|-------------------------------------------------------|--------------------------|--------------------|
| Radiator and pipework surface with Domestic Hot Water | max. 12.5 m <sup>2</sup> | 135ft <sup>2</sup> |
|                                                       | min. 10.2 m <sup>2</sup> | 110ft <sup>2</sup> |

The above range of figures should not be exceeded. The surface area of the radiators and pipework is based on an average heat emission of 0.5 kW/m<sup>2</sup> - 160 Btu/ft<sup>2</sup>/h.

### Site Requirements for Appliance Installation

1. The Fireplace recess, chimney and hearth should comply with the relevant Building Regulations to dimensions shown on diagrams.

#### 2. The Chimney

a) **Checking Existing Chimney:** The internal and external condition of the chimney should be checked **before** the appliance is installed and rectification made where necessary to prevent leakage or porosity. The chimney soundness can be confirmed by smoke testing and advice on the test method, can be obtained from the local S.F.A.S. When repairing or re-using existing chimneys, it is recommended that the Building Control Officer should be consulted before the commencement of work with particular attention to the chimney height and its termination.

ENSURE THE CHIMNEY FLUES ARE THOROUGHLY SWEEPED BEFORE THE APPLIANCE IS INSTALLED AND AT 12 MONTHLY REGULAR INTERVALS AFTER THE APPLIANCE IS COMMISSIONED.

b) **Erecting New Chimney:** These must be in accordance with the current Building Regulations 1976 (England and Wales) and in Scotland, The Building Standards (Scotland) (Consolidation) Regulations 1971 and the Codes of Practice for Chimneys and Flues, CP.131.1974. Ensure that the chimney liners are free of projecting internal building jointing composition before the appliance is installed.

ENSURE THE CHIMNEY FLUES ARE THOROUGHLY SWEEPED AT 12 MONTHLY INTERVALS AFTER THE APPLIANCE IS COMMISSIONED.

In either instance, the appliance should be installed and conform to the current Codes of Practice for Installation of Domestic Heating and Cooking Appliances Burning Solid Fuel - CP.403:1974.

**Note Re Chimneys:** However well designed, constructed and positioned, the satisfactory performance of a flue can be adversely affected by downdraught caused by near-by hills, adjacent tall buildings or trees. These can deflect wind to blow directly down a flue or create a zone of high pressure over the terminal.

A suitable anti-downdraught terminal such as the Marcone will usually effectively combat direct down blow but no cowl is likely to prevent downdraught due to a high pressure zone.

c) **Factory Made Insulated Chimney** If the appliance is installed below a factory made insulated chimney it should be ceramic lined and comply with BS.4543:1970. If the chimney is straight the recommended minimum diameter is 150mm (6in); if the chimney has offsets the recommended minimum diameter is 175mm (7in). If a non-ceramic lined type of insulated chimney is being considered the manufacturer should be consulted as to suitability.

#### 3. Ventilation

There must be a permanent unobstructed air vent of 28.25 sq. inches connecting to the outside air, or a connecting room which does so, to the room in which the appliance is installed

#### 4. The Hearth

The superimposed hearth requires to be flat, level with the rear hearth and comply dimensionally with the Building Regulations, e.g. a minimum dimension of 390mm (15½") from the face of the surround to the front edge of the hearth.

#### 5. The Surround

The surround should be 64mm to 100mm (2½"-4") return to wall at the fire opening vertical, have a fire opening 560mm wide x 610mm High (22" x 24") and a flat area not less than 660mm wide x 660mm (26 x 26") above hearth level against which the appliance must be sealed with the asbestos rope fitted around the top and sides at the rear of the front plate of the appliance.

#### 6. Openings

Opening(s) for pipes required in side(s) of recess jambs. Opening 225mm (9") square in centre of breast directly above lintel. See note after paragraph 7 of Installation.

### Connections and Pipework

1. Boiler is of Welded Steel with 2-1" BSP Flow and Returns on each side.
2. The INDIRECT hot-water storage cylinder should only be the double feed type and must not be less than 140 litres (30 gallons) actual capacity to B.S.1566 Part 1:DF: type 8.
3. A gravity circulation is necessary to the INDIRECT cylinder.
4. One flow connection from the boiler (preferably the flow to the cylinder) must have an open Vent. The connection to the boiler must be such that air cannot be trapped in the boiler.
5. Fit a drain cock to the lowest part of the system.
6. Primary Flow and Return pipes should not exceed 10m (30ft) in length of 25mm (1") pipe.
7. As well as the indirect H.W. Cylinder the gravity circuit must include a radiator of 10-15sq. ft. heating surface.
8. A radiator of a suitable size with a thermostatic control valve may be required for installation in the same room as the appliance if the room size exceeds 28.3 m<sup>3</sup> (1000 ft<sup>3</sup>). This gives greater flexibility of the heating system.

### Installation

1. Lift off glass panelled front-frame and ashpit door. Lift out front firebars and bottomgrate bars.
2. Plug any boiler connections not required.
3. Check that the asbestos rope is in place around the sealing plate of the appliance; place the appliance in position, central with the fire opening and push it backwards until the rope seal is tight against the surround. Where the surround has an uneven surface additional material will be required to ensure a good seal.

4. Drill through the fixing holes (2) in the base plate into the hearth with No. 12 masonry drill and fix with No. 12 metal Rawlplugs and screws.

5. Make all pipe connections to the boiler, fill with water and test.

6. Fill the cavity between the appliance and the recess with vermiculite concrete (6 parts vermiculite to 1 part cement) and make good the opening in the recess jambs using lime mortar.

7. Connect the flue outlet of the appliance to the chimney with a length (normally 450 mm - 18") of 150 mm (6") i/dia cast iron flue pipe sealed into the socket of the flue outlet and firmly supported centrally in the chimney. Flue pipe supplied by us is cut square at one end and at an angle of  $7\frac{1}{2}^\circ$  at the other. Depending on the thickness of the fireplace surround installed, seal the end of flue pipe to the appliance most suited to centrally situate the pipe in the chimney. Continue infilling of the opening over the top of the appliance and around the cast iron pipe with vermiculite concrete. Finish off infill by sealing at top with a sand/cement mix flounced into the chimney. Make good the opening in the chimney breast.

**Note** - Should it not be convenient to cut a 9" square hole in centre of breast above lintel, i.e. for reasons of decor or high lintel, etc. the fluepipe can be wedged temporarily in the chimney, then lowered after the appliance is placed in position. The infill will then require to be carried out through the access holes to water pipes in recess jambs, sealing up and around flue pipe.

Whatever method is used, no voids should be left around or above the appliance, the flue pipe should be sealed into the chimney and no air from the room should enter the chimney except through the appliance.

8. Replace bottomgrate bars, front firebars, ashpit door and glass panelled front frame. Ensure glass panelled front frame with asbestos seal is correctly in position.

9. Fit the bottomgrate riddling handle by inserting through the slot in the lower section of the RH side panel and screwing into the hole in the riddling arm.

10. Fix the enamelled canopy and ashpit fascia panel which are packed in a separate carton. The fixing method for both parts is similar as follows:

- From the inside slacken one of the screws projecting through the distance bush until it is level with the end of the bush. See Diagram 1.
- Insert the projecting hinge screw at the other end into the slotted hole in the side panel of the heater.
- With the hinge quadrants resting on the stop pins attached to the side panels raise canopy/panel to UP position.
- Tighten the hinge screw previously slackened into the distance bush with the point entering the slot in the side panel. See Diagram 2.

#### Alternatively

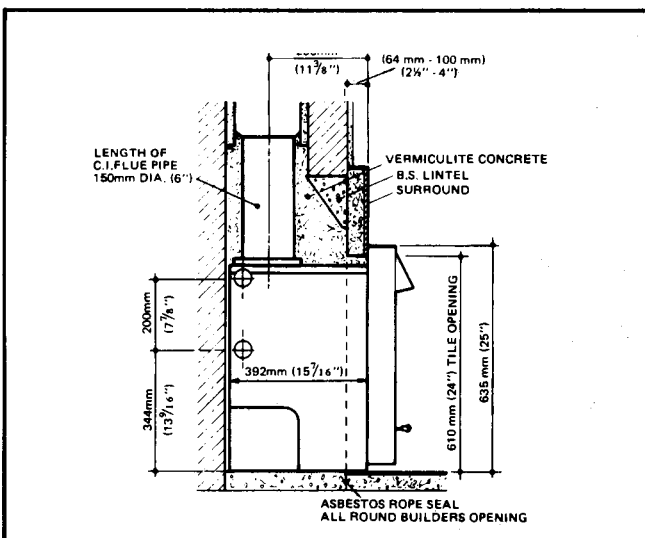
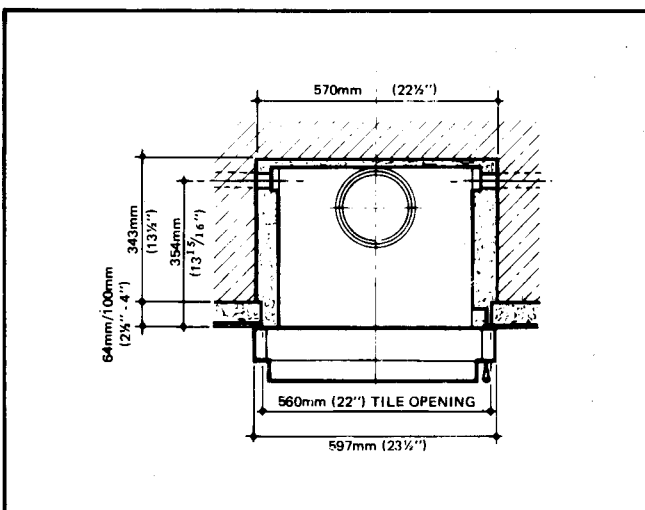
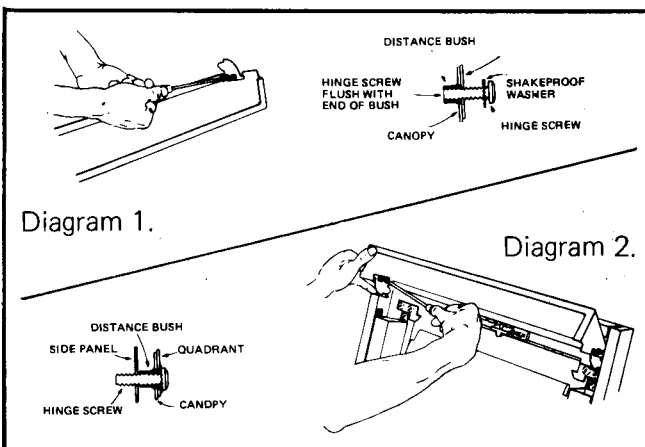
The appliance may be free-standing in a specially prepared recess, using a raft lintel into which the fluepipe from the appliance is sealed, and a special surround with a removable panel. The free-inset method avoids disturbing the chimney breast and makes easy access to the appliance and its connections at all times. Details of this method can be obtained from the Solid Fuel Advisory Service or the National Coal Board.

#### Commissioning

Check, test fire and balance system.

**Special Note:** The customer's attention should be drawn to the need to obtain supplies of suitable quality and size of bituminous coal from his coal merchant. The customer must complete and hand to his coal merchant the declaration

from CCT/RAYBURN PRINCE 76 between the operating instructions, also obtainable from his coal merchant or from the nearest Solid Fuel Advisory Services Office. This will help ensure that the correct fuel is supplied, and is absolutely essential if the customer lives in a Smoke Control Area. It is normally illegal to use bituminous coal in a smoke control area, but this is permitted with the Rayburn Prince 76 which is designed and approved for this purpose, provided the customer completes and hands to his merchant the declaration form. IN SMOKE CONTROL AREAS THE SYSTEM SHOULD NOT BE COMMISSIONED UNLESS THE DECLARATION FORM HAS BEEN COMPLETED SO THAT THE RIGHT COAL CAN BE SUPPLIED.



Aga-Rayburn is a business name of Glynwed Appliances Ltd a member of the Glynwed International plc group of companies

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