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THE RAYBURN REMBRANDT

Installation Instructions Rembrandt C

Consumer Protection Act 1987

As manufacturers and suppliers of cooking and heating products, in compliance with Section 10 of the Consumer Protection Act 1987, we take every care to ensure, as far as is reasonably practicable, that these products are so designed and constructed as to meet the general safety requirement when properly used and installed. To this end, our products are thoroughly tested and examined before despatch.

Performance

The fire with its high output boiler is intended to provide space heating and the heating of domestic hot water and radiators, and has been approved by the Domestic Solid Fuel Appliance Approval Scheme.

An adjustable boiler damper controls the hot water output whilst an independent adjustable throat restrictor within the appliance canopy minimises the heated air loss from the room to the chimney flue.

Rating

	SMOKELESS AND OTHER MANUFACT. FUELS		BITUMINOUS HOUSE COAL	
	Boiler Damper Open	Boiler Damper Closed	Boiler Damper Open	Boiler Damper Closed
Space Output	2.5 kW (8,500 Btu/h)	2.8 kW (9,500 Btu/h)	2.0 kW (7,000 Btu/h)	2.1 kW (7,000 Btu/h)
Maximum Room Size		57m ³ (2,000ft ³)		43m ³ (1,500ft ³)
Hot Water Output	5.5 kW (18,500 Btu/h)	4.7 kW (16,000 Btu/h)	7.5 kW (25,000 Btu/h)	5.3 kW (18,000 Btu/h)

The above figures are based on an average burning rate of Coalite at 1.36 kg/hr (3.0 lbs/hr) and Bituminous Coal at 1.81 kg/hr (4.0 lbs/hr).

Size of Cylinder

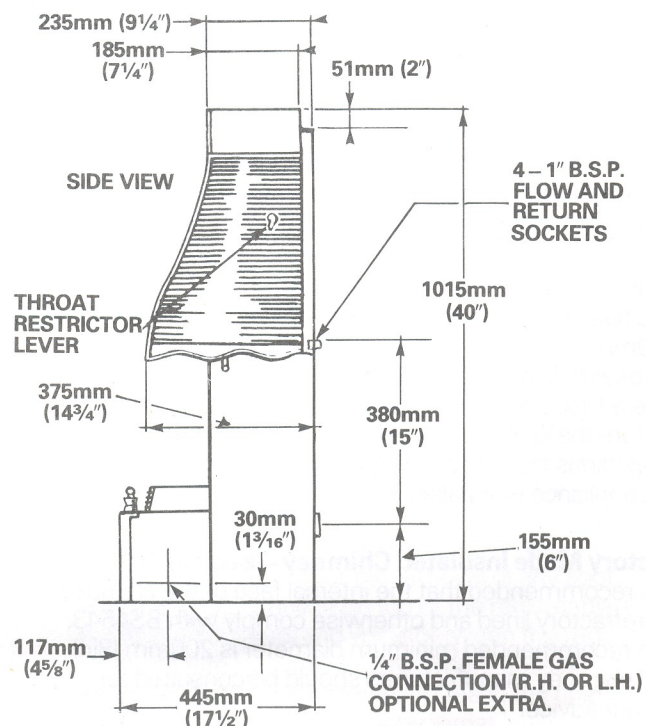
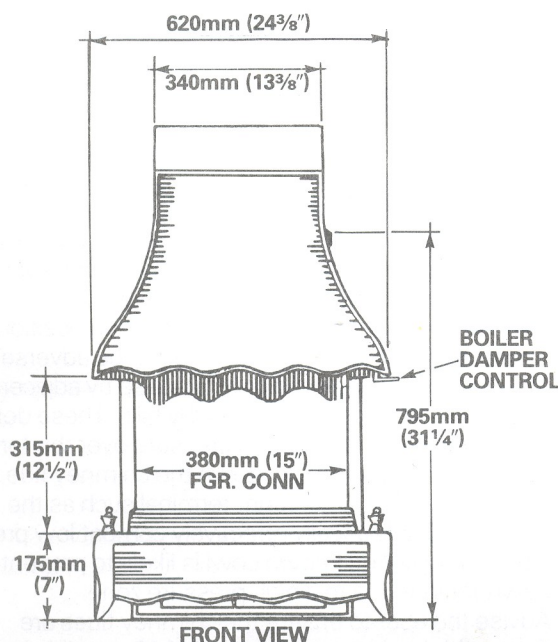
Domestic hot water and heating 140 litre (30 galls)

	COALITE AND OTHER MANUFACT. FUELS	BITUMINOUS HOUSE COAL
Maximum pipe & radiator surface only	10.75m ² (115.7ft ²)	14.8m ² (159.4ft ²)
Maximum pipe & radiator surface plus Domestic Hot Water	8.4m ² (90.5ft ²)	12.5m ² (134.4ft ²)

The recommended heating surface area is based on an average heat emission of 0.5 kW/m² (160 Btu/h/ft²). These figures are maxima and must not be exceeded. A margin (about 10% or 1.4m²-15ft²) is recommended.

Hot Water System

1. A 140 litres (30 gallons) capacity indirect hot water storage cylinder of the double feed type, complying with BS1566 Part 1:DF Type 8 should be lagged and fixed vertically as near as possible to the stove. The 28mm minimum diameter primary flow and return pipes must not exceed 10m (30ft) in length and pipes longer than 5m (15ft) must be lagged. Ensure that the flow pipe rises continuously from the stove boiler to the cylinder to ensure good gravity circulation. In combined systems, the water draw-off pipes to the taps must be dead leg connection from the vent/expansion pipe.
2. One boiler flow connection (preferably that to the cylinder), must have an open vent. The connection to the boiler must be such that air cannot be trapped in the boiler. Any pipe size reduction must be made on the vertical pipe of the vented flow pipe. The heating flow and return pipes may be 22mm and should preferably be connected to opposite tappings to each other on each side of the boiler.



NOTE: There are two sets of 'flow and return' connections on the rear face of the boiler.

3. All installations must be fitted with a drain tap at the lowest point of the system.
4. It is recommended that a gravity heat leak radiator 0.9-1.4m² (10-15ft²) heating surface be included, or a reverse acting cylinder thermostat to activate the pump in the event of overheating.

The Chimney

For correct operation of the appliance, the height of the chimney from its base should not be less than 5.5m (18ft) and terminate above the roof in accordance with current Building Regulations and requirements as outlined in BS6461:1984 Parts 1 and 2 should be observed. The structural flue through the chimney should not be less than 200mm (8in) diameter. Pargeted lined flues, 230 x 230mm (9in x 9in) must be in sound condition, and any internal offsets should not be less than 45° to the horizontal and preferably 60°. Check that the flue exit is not obstructed or reduced in size. The vertical height between the appliance rectangular flue outlet and the bottom of the chimney structural flue should not be less than 380mm (15in) and open voids above the appliance must be omitted by corbelling the brickwork and flaunching the brick pargetry between the appliance outlet and the base of the chimney flue. Alternatively, an optional adaptor is available for connecting the appliance to the chimney flue to avoid this extra brickwork and flaunching.

IMPORTANT: FAILURE TO OBSERVE THE RECOMMENDED MINIMUM SIZES OR METHODS OF FLUE CONNECTION MAY LEAD TO FUME EMISSION INTO THE ROOM AND REDUCED BURNING RATES.

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 air leakage or porosity.

The flue through the chimney should be formed with 185mm (7¹/₄in) sq. or 200mm (8in) minimum diameter, minimum moisture and acid resistant liners to BS1181:1971 or precast linings as specified in the current Building Regulations 1985 and requirements in BS6461:1984 Parts 1 and 2 should be observed. When repairing existing chimneys, it is recommended that the Building Inspector be consulted before the commencement of work with particular attention to the chimney height and its termination.

THE CHIMNEY SHOULD BE SWEEPED BEFORE INSTALLATION.

An Installer must ensure that appropriate protective clothing is worn/issued when carrying out an installation that may result in the disturbance of asbestos.

New Chimney

The flue should not be less than 185mm (7¹/₄in) sq. or 200mm (8in) diameter and its soundness confirmed by smoke testing or consulting the district S.F.A.S. who will give advice on the test method. Ensure the chimney liners are free of any internal projections such as building jointing composition before the appliance is installed.

Factory Made Insulated Chimney – See Fig. 5

It is recommended that the internal face of the chimney, be refractory lined and otherwise comply with BS4543. The recommended minimum diameter is 200mm (8in) and chimney manufacturers should be consulted for further advice.

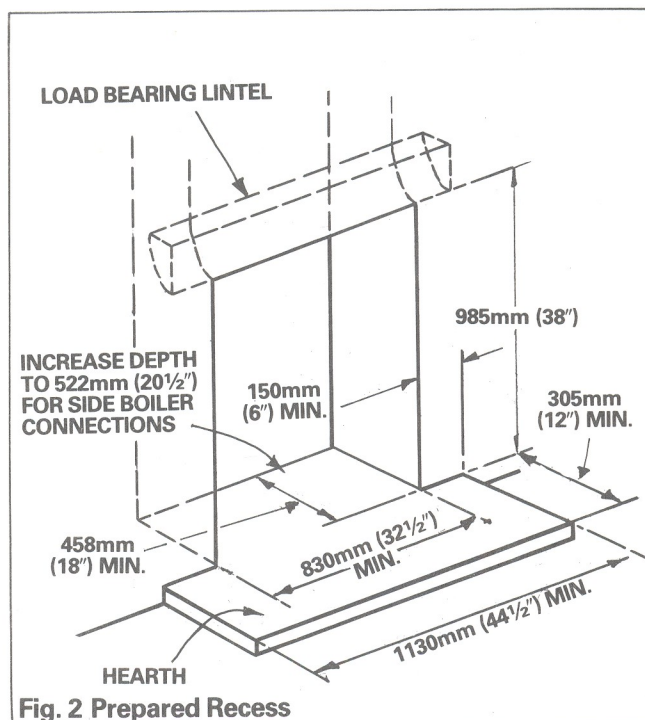


Fig. 2 Prepared Recess

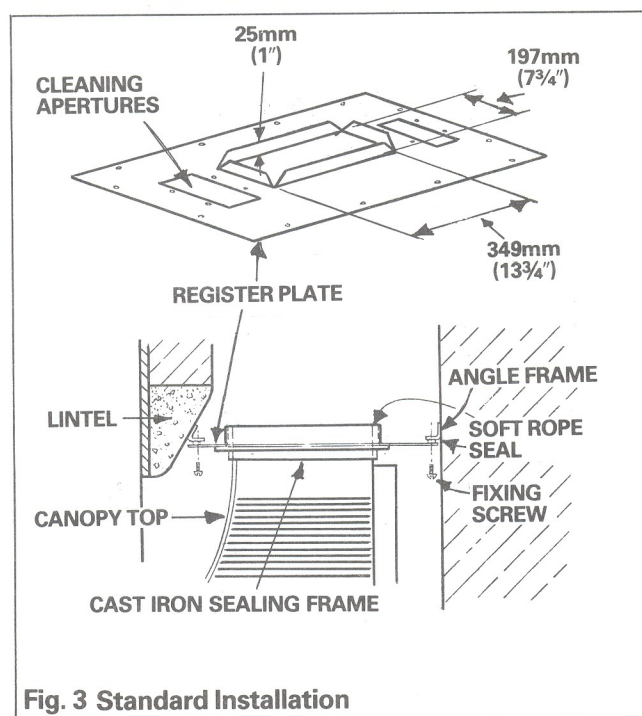


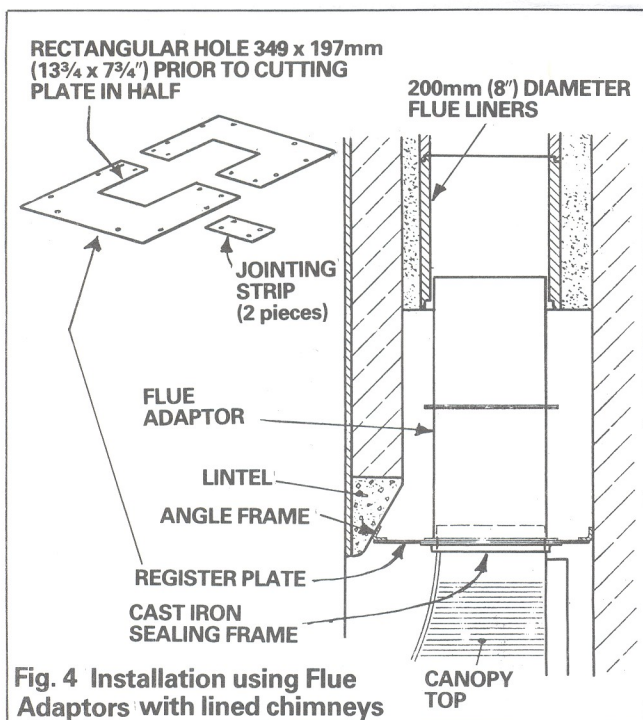
Fig. 3 Standard Installation

Chimney Terminations

All chimneys should terminate above the roof level in accordance with current Building Regulations and as outlined in BS6461:1984 Parts 1 and 2.

However well designed, constructed and positioned, the satisfactory performance of a flue can be adversely affected by the down-draughts caused by adjacent tall buildings and trees or even nearby hills. These deflect the wind creating a zone of high pressure over the terminal causing it to blow directly down the chimney flue. A suitable anti-downdraught terminal such as the MARCONE will usually effectively combat low pressure down-blow but no known cowl is likely to prevent downdraught due to a high pressure zone.

Advise the user to ensure the chimney flues are thoroughly swept at a minimum of 12 monthly intervals after the appliance is commissioned particularly if bituminous coal is consistently being burned.



NOTE: IF SIDE BOILER OUTLET CONNECTIONS ARE REQUIRED THE DEPTH OF THE RECESS WILL HAVE TO BE INCREASED BY 64mm (2 1/2in) TO ACCOMMODATE THE ELBOW FITTINGS.

Air Supply

A permanent unobstructed air vent is required having a minimum effective area of 275cm² (42.75in²) and communicating directly to outside air or an adjacent room which itself has a permanent air vent direct to outside air.

Effect of Extractor Fan

Avoid if possible, the installation of an extractor fan in the same room as the appliance or the room where the permanent vent is located. Compensating extra air inlets must be introduced equivalent to the capacity of the fan when fitted.

Testing and Commissioning

After completing the installation, the Heating Contractor should demonstrate to the user, the operation of the fire, e.g. primary air setting lever, boiler damper lever and throat restrictor as well as the routine flue cleaning method.

1. If the height of the recess opening is higher than 965mm (38in) and cannot be reduced, fit an airtight metal extension (optional extra) or sleeve over the top of the canopy flue outlet. The overlap joint should be caulked with soft rope to form a seal and the top of the sleeve should extend above the register plate by 50mm (2in).
2. Should there be a large cavity or void above the register plate, a longer extension should be fitted to the fire outlet, extending to the throat or gather of brick flue. Alternatively, a purpose made adaptor (optional extra) may be fitted.

Installation

Due regard should be taken of the requirements of the Health and Safety at Work Act, 1974 and care must be taken in handling the appliance to the site installation with aids used wherever possible.

The caustic nature of fire cement can affect the skin when being applied and efforts should be made to remove cement from hands immediately after use by washing, or preferably use of barrier gloves.

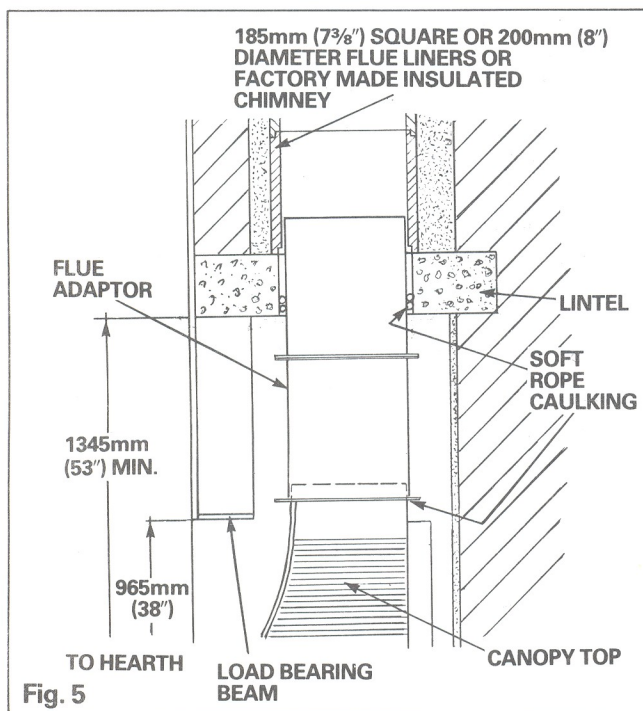
The Rayburn Rembrandt fire is delivered completely assembled and ready for fixing. The boiler connections are on the back face of the boiler so that back and side outlet pipe installations are available. Decide on direction of fitted outlet pipe fittings and place appliance concentrically below chimney flue.

1. Mark and drill/cut the clearance hole positions in the recess (back or sides) for boiler pipe access. Plug any boiler connections not required and connect pipework terminating in an accessible position.

2. a Standard Installation – Fig. 3

The top of the recess must be sealed, preferably by a sheet metal register plate with a completed rectangular flanged clearance slot 349mm (13 3/4in) wide x 197mm (7 3/4in) deep. Cut the slot about 50mm (2in) smaller than the completed size and snip the corners to mitre followed by a plunged 25mm (1in) upward bend.

The register plate should incorporate an airtight access door/opening for the removal of any soot which may accumulate on top of the register plate. Avoid large pockets and voids between the register plate and flue by suitable filling where possible. It is essential that no air is allowed to reach the chimney flue except through the canopy throat.



Preparation of Builders Recess Opening

The appliance and recess, hearth and chimney flue installation should be in accordance with the relevant recommendations of the British Codes of Practice BS8303:1986 and BS6461:1984 Parts 1 and 2, with the boiler and heating installation complying with BS5449 Part 1:1977.

The boiler section must also be installed in accordance with the bye-laws of the Local Water Undertaking, Regulations for the Electrical Equipment of Buildings – published by the Institute of Electrical Engineers, and any relevant requirements of the Local Authority.

The appliance must only be installed in a non-combustible recess in which the hearth must be level and together with the adjacent walls, conform to the current Building Regulations, See Fig. 2.

The recommended height of recess from hearth level to register plate is 965mm (38in) and recess depth of 458mm (18in) minimum. An allowance of 100mm (4in) minimum clearance each side of the canopy provides a recess width of 830mm (32 1/2in).

A conventional method of securing and sealing the register plate is to secure an angle frame all round the walls of the recess and attach the register plate to the frame with fixing screws ensuring the joint is sealed with soft rope and fire cement.

2. b **Lined Chimney with Flue Adaptor Installation**

(i) **With Existing Recess – Fig. 4**

- a. Determine the size of register plate and cut rectangular slot 349mm x 197mm (13³/₄ x 7³/₄in). Cut register plate into two halves leaving a L.H. and R.H. section and drill fixing holes in each section for future connection by jointing strip. See Fig. 4.
- b. Position adaptor in recess above lintel level and temporarily wedge in position.
- c. Locate and fix register plate support frame to brickwork.
- d. Position appliance in recess concentrically below chimney flue and lower wedged adaptor on to outlet of appliance.
- e. Attach jointing strip to one section of register plate and seal/secure register plate section to angle support frame. Holding adaptor with one hand, drill hole through register plate section and flange of adaptor and secure together by screw.

NOTE: THIS PREVENTS THE ADAPTOR LIFTING WHEN SWEEPING CHIMNEY BY BRUSH. JOIN OTHER REGISTER PLATE SECTION IN SIMILAR FASHION TO OTHER AND SECURE SECTIONS TOGETHER BY FIXING SCREWS IN JOINTING STRIP.

2. b (ii) **With Prepared Recess – Fig. 5**

- a. Prepare recess at least 830mm (32¹/₂in) wide x 1345mm (53in) high but without front wall below lintel.
- b. Position adaptor as high as possible with spigot located through hole in lintel and temporarily wedge in position.
- c. Locate appliance concentrically below chimney flue and lower wedged adaptor on to outlet of appliance. Caulk soft rope between adaptor spigot and lintel clearance hole ensuring a permanent airtight joint.
- d. Finish brickwork beneath lintel complete with brick bearer and forming the front height of recess at 965mm (38in).

3. With the appliance in position, carefully seal the inside boiler face joint and firefront to hearth with cement making an airtight joint.

NOTE: WHEN INSTALLING WITHOUT THE FLUE ADAPTOR, THE GAP BETWEEN THE REGISTER PLATE AND APPLIANCE CANOPY SHOULD BE SEALED WITH SOFT ROPE HELD IN POSITION BY THE CAST IRON CLAMPING FRAME AROUND THE CANOPY.

4. If gas ignition burner is included, open packet containing injector and socket and fit as directed to outlet of gas tap. Connect ignition burner to injector socket and blank off opposite side of burner which is suitable for Natural Gas only.
Light the gas burner checking that when correctly located, the flames pass through the air spaces of the bottom grate.

Commissioning

Check that the system is full of water and free from air locks. Select the correct front firebar to suit the fuel to be used. See Figs. 1 and 2 of Operating Instructions. When lighting, place paper and sticks with a small quantity of fuel on to the bottom grate. Open the ashpit door fully via the lever, pull/close the boiler damper lever and set the throat restrictor at fully open by pulling the canopy handle as far forward as possible.

Ignite fuel and when established, set throat restrictor to minimum by pushing the canopy handle as far away as possible and the other controls to suit requirements. Balance the water system.

WHEN USING GAS IGNITION BURNER, DO NOT LEAVE ALIGHT LONGER THAN 15 MINUTES.

With the appliance under fire, check for soundness of seals/joints and that the flue functions correctly permitting all smoke and fumes to be vented through the chimney.

Testing after Commissioning

After completing the installation, the Heating Contractor should demonstrate to the User, the operation of the appliance and the routine flue cleaning method.

Ensure the Operating Instructions are left in the possession of the User.

Weight of complete appliance: 121.5 kg (268 lbs).

Replacement parts if required are available through your local Stockist.

With Rayburn's policy of continuous product improvement, the Company reserves the right to change specifications and make modifications to the appliance described and illustrated at any time.



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