

Part No. DOC 12 Rev. 04 January 2003

FITTING INSTRUCTIONS

Sealed System Kit for Multi Pass boilers

**TO BE READ IN CONJUNCTION WITH THE INSTRUCTION MANUAL
SUPPLIED WITH THE BOILER**

The fitting of this sealed system kit allows the use of the following Grant MultiPass boilers on sealed heating systems.

Kit No.	Vessel size	Boiler	Approx. system volume (1 bar/110°C)
1	12 litres	50/70, 70/90	157 litres
2	12 litres	90/110, 110/140	157 litres
3	24 litres	140/160, 160/200	313 litres

1 *Kit contents*

The kit includes the following items:

- a Automatic air vent/pressure relief valve assembly:
To fit into one of the two threaded connections on the top of the boiler.
- b Expansion vessel/filling loop/pressure gauge assembly:
To hang on the front of the boiler.
- c Drain cock/flexible hose connection assembly:
To fit into the threaded connection in the bottom right front of the boiler (replacing the drain cock).
- d Flexible hose:
To connect the expansion vessel assembly to the boiler drain cock assembly.
- e White blanking plate with two holes:
To replace either left hand, right hand or rear case blanking plate, to provide holes for extra pipe connections (Kitchen models only).

2 *Fitting procedure - See Fig. 1*

Note: The sealed system kit should be fitted to the boiler before the boiler is installed.

- 1 **Fit the automatic air vent/pressure relief valve assembly** to one of the two ½" BSP tappings in the top of the boiler (the other tapping being used for the thermostat pocket - see section 4.3 of the boiler installation instructions), as follows:
 - a **Kitchen models** - having removed both top casing panels, unclip the flexible air supply tube from its 'U' bracket. Unscrew the bolt in the centre of the case cross-member and remove the 'U' bracket. Unscrew the four fixing screws and remove the cross-member. Retain the 'U' bracket, nut and bolt, cross-member and screws for re-fitting.
 - b Separate the bent coupling from the automatic air vent/pressure relief valve assembly and screw it into the tapping, using a suitable sealant or PTFE tape on the male thread of the coupling, finally aligning the compression connection to face towards the **front** of the boiler.

This appliance must be installed, commissioned and maintained by a competent person according to the rules in force or an Oftec registered technician

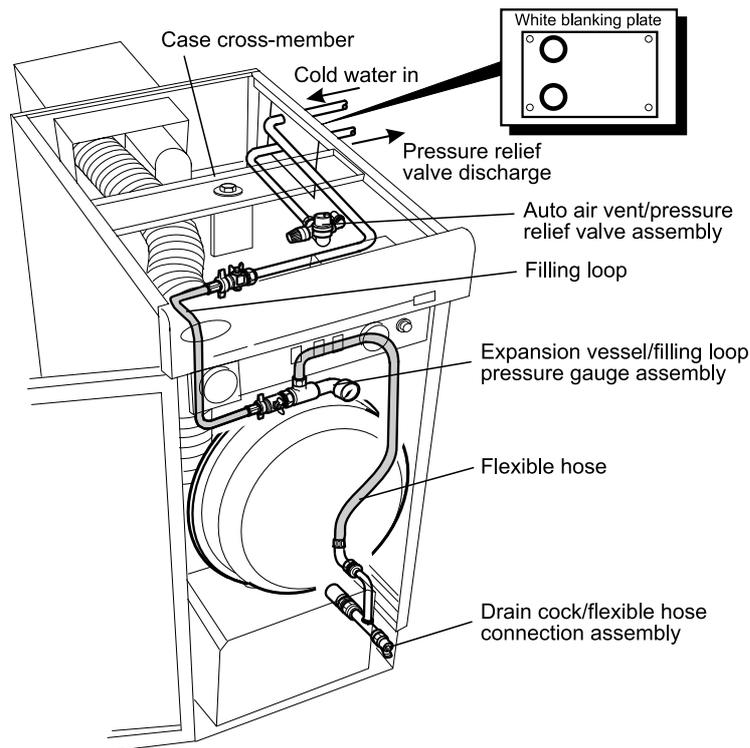


Fig. 1 (70/90 Kitchen model shown)

- c Fit the pipe elbow of the automatic air vent/pressure relief valve assembly into the bent coupling, such that the 15 mm compression connection on the pressure relief valve faces towards the **back** of the boiler. Tighten the compression connection.

Note: As supplied, the automatic air vent/pressure relief valve assembly is suitable for fitting in the **right hand** tapping of the boiler.

If it is to be fitted in the left hand tapping, it will be necessary to rotate the automatic air vent through 180° (so that it points upwards when fitted). To ensure watertightness, it will be necessary to break and remake the connection to the reducing elbow, using a suitable sealant.

- d Re-fit the case cross-member and 'U' bracket (not necessary if a balanced flue kit is being fitted). Clip the end of the flexible air supply tube back into the 'U' bracket (conventionally flued boilers only).

- 2 **Fit the drain cock/flexible hose connection assembly** to the drain cock connection (at bottom right front of boiler), as follows:

- a **Kitchen models** - remove the grey plinth (loosen the wingnut securing the right hand side of the plinth inside the case, pull the right hand side of the plinth forward and remove from the boiler).

Undo the single burner fixing nut (top of mounting flange) and remove the burner from the boiler. Unscrew and remove the drain cock from the boiler.

- b Unscrew and remove the threaded connector from the union on the end of the drain cock/hose connection assembly. Screw the connector into the drain cock tapping on the boiler, using a suitable sealant or PTFE tape to seal.
- c Re-connect the drain cock/hose connection assembly to the connector, with the hose connection pipe upwards, and tighten the union.
- d Connect one end of the expansion vessel hose to the ½" BSP connection on the drain cock/hose connection assembly, ensuring that the rubber sealing washer is fitted inside the union nut.



3 **Fit the expansion vessel/filling loop/pressure gauge assembly** on the front of the boiler, as follows:

- a Connect the free end of the expansion vessel hose to the ½" BSP connection on top of the expansion vessel assembly, ensuring that the rubber sealing washer is fitted inside the union nut.
- b **Kitchen models** - hang the assembly on the upper of the two handles on the front access door, using the hook on the expansion vessel bracket.
- c **Boiler house models** - position the hanging bracket supplied on the upper front cover panel of the boiler (100 mm down from the top edge, and offset by 65 mm to the left of the vertical centreline of the boiler), mark through from the bracket and drill 4 x 3 mm dia. holes in the outer blue panel only.

Secure the bracket in place using the self tapping screws provided, and hang the expansion vessel assembly on the bracket using the hook on the expansion vessel bracket.

4 **Kitchen models - Fit the replacement case blanking plate with two holes** in either the right hand, left hand or rear panel as required, as follows:

- a Unscrew and remove the nut and retaining plate from each of the four studs on the inside face of the existing case blanking plate, and remove the plate from the boiler.

- b Fit the replacement blanking plate, securing it in position using the four nuts and retaining plates previously removed from the original blanking plate.

5 **Fit the pipework to the pressure relief valve and filling loop valve.**

Refer to Fig. 2 for suggested pipework routes within the top of the boiler.

Note: Copper pipework is **NOT** supplied with the kit.

- a The 15 mm copper discharge pipe from the pressure relief valve should pass through the lower of the two holes in the case blanking plate provided (Kitchen models only).

Important: The discharge pipe must be routed clear of the boiler to a drain, in such a manner that it can be seen but cannot cause injury to persons or property.

- b The 15 mm copper cold water supply pipe should pass through the upper of the two holes in the case blanking plate and be routed such that the filling loop inlet valve is accessible through the front door of the boiler (Kitchen models only).

Note: For boilers using a low level balanced flue system, if the flue is to either the rear or left side of the boiler, the cold water inlet and pressure relief valve discharge pipes must be routed through the right side of the boiler. Similarly, if the flue is to the right side of the boiler, the two pipes must be routed to the left of the boiler.

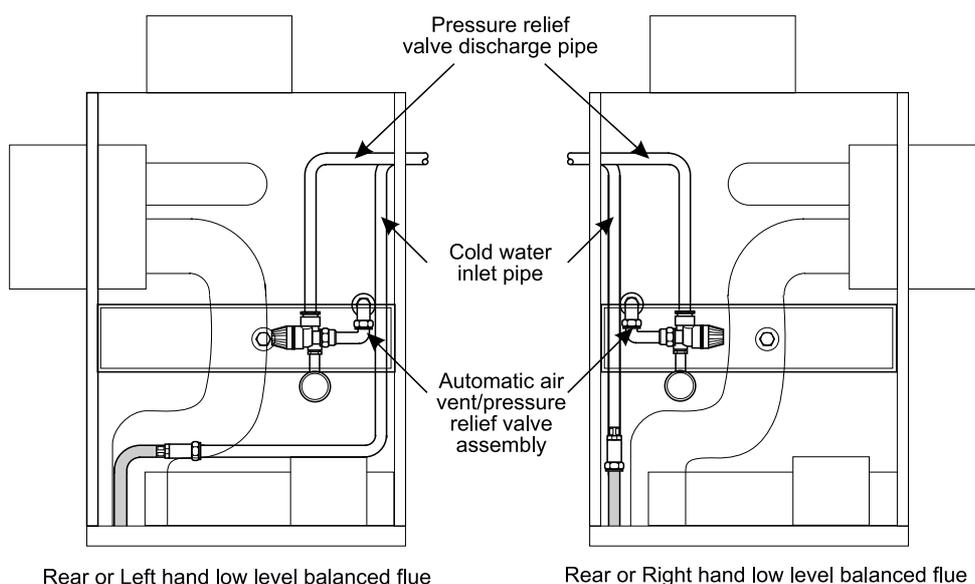


Fig. 2

3 *Fill the system*

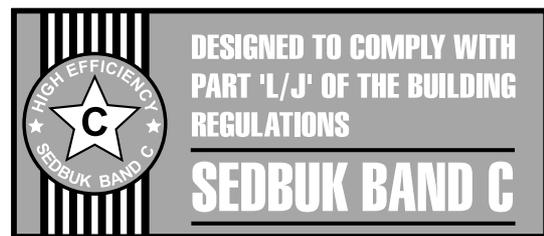
After installing the boiler, the sealed system should be filled as follows:

- 1 Check that the small cap on the automatic air vent is screwed on fully then unscrew it one complete turn - the cap should be left in this position from now on.
- 2 Ensure that any valves in the system pipework are open.
- 3 With the flexible hose connected between the cold water inlet valve and filling valve (connected to pressure gauge) open the two valves to fill the heating system.
- 4 Vent each radiator in turn, starting with the lowest one in the system, to remove air.
- 5 Check the operation of the pressure relief valve by turning the head anticlockwise until it clicks. The click is the safety valve lifting off it's seat to allow water to escape from the system - check that this is actually happening.
- 6 Continue to fill the system until the pressure gauge indicates 1.0 bar, close the filling valve and cold water inlet valve and check the boiler and system for water soundness, rectifying where necessary.
Water may be released from the system by manually operating the pressure relief valve until the system design pressure is obtained.
- 7 The system design pressure (cold) should be between 0.5 and 1.0 bar, this pressure should be equivalent to the maximum static head (in bar) + 0.3 bar (1 bar = 10.2 metres head of water), where the static head is the vertical height from the centre of the expansion vessel to the highest point of the system.
- 8 On completion of filling, ensure that both filling loop valves are closed and disconnect the flexible filling hose.

Complies with the EC Low voltage, Electromagnetic compatibility and Boiler efficiency Directives



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