Solar Thermal

Grant CombiSOL Control System

Solar Hot Water Control

Installation Instructions

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GRANT

EFFICIENT HEATING SOLUTIONS

Grant CombiSOL Control System

General

The Grant CombiSOL control system allows un-vented stored secondary hot water, heated by a solar thermal system, to be used safely at hot water outlets or to be seamlessly diverted through a combination boiler. Using a manifold arrangement designed and set specifically to control the temperature of the pre-heated hot water supplied to a combi boiler, the Grant CombiSOL gives optimum control of the hot water supplied to the taps, showers, etc.

When the pre-heated (stored) water temperature is high enough (> 42°C) the Grant CombiSOL control diverts the water directly to the hot tap without it passing through the Combi boiler and being heated – thus preventing unnecessary fossil fuel use.

At temperatures of ≤ 42°C the CombiSOL control will supply pre-heated water to the Cold inlet of the Combi boiler, at a maximum temperature of 24°C.

IMPORTANT. Fully read these installation instructions BEFORE installation. The Grant CombiSOL Temperature control manifold and the separate Hot water mixing valve MUST be installed as directed in these instructions. Failure to install this control system correctly will invalidate the product warranty.

Kit Contents

1 x Temperature control manifold assembly
1 x Hot water mixing valve
4 x 15mm compression tails – with sealing washers
3 x Compression nuts – with olives

Description

The temperature control manifold consists of two valves (Valves 1 and 2) both factory set to perform specific functions. Refer to Figure.1. For identification each valve is clearly marked with the valve number. The function of these valves is as follows:

Valve 1 – thermostatically controls the temperature of the pre-heated water to the Combi boiler, preventing it from exceeding 24°C.

Valve 2 – functions as a 'diverter valve'.

At inlet temperatures > 42°C (from the secondary hot water store) the manifold will supply hot water directly to the hot inlet port of valve 3 (to be thermostatically controlled) and on to the outlet without passing through the Combi boiler.

At inlet temperatures ≤ 42°C the valve will supply water to the 'Hot' inlet port of valve, to be thermostatically controlled to no more than 24°C and on to the inlet of the Combi boiler.

The Hot water mixing valve (valve 3) thermostatically controls the temperature of the water flowing to the hot taps, limiting it to 49°C at outlet from the valve. This valve can be fitted anywhere in the hot water supply pipe.

Installation

The Grant CombiSOL system is WRAS Approved and must be installed in accordance with the Water Regulations, Building Regulations and any relevant local Regulations or Bylaws in force.

Before installation it is important to ensure that the Combi boiler concerned can accept an incoming water temperature of 24°C. If in doubt, contact the boiler manufacturer for confirmation of the maximum inlet water temperature.

Any unvented hot water cylinders must be installed by a competent person in compliance with all relevant current legislation, codes of practice and local by-laws.

Connections

The valves are supplied with compression connections to suit 15mmØ pipe.

Temperature control manifold - Fit two of the 15mm compression tails, with the sealing washers provided, to the threaded connections at each end of the assembly.

Fit two of the 15mm compression nuts and olives to the two remaining threaded connections on the valves.

Hot water mixing valve - Fit two of the15mm compression tails, with the sealing washers provided, to the threaded connections on each side of the valve.

Figure 1:
Temperature control manifold

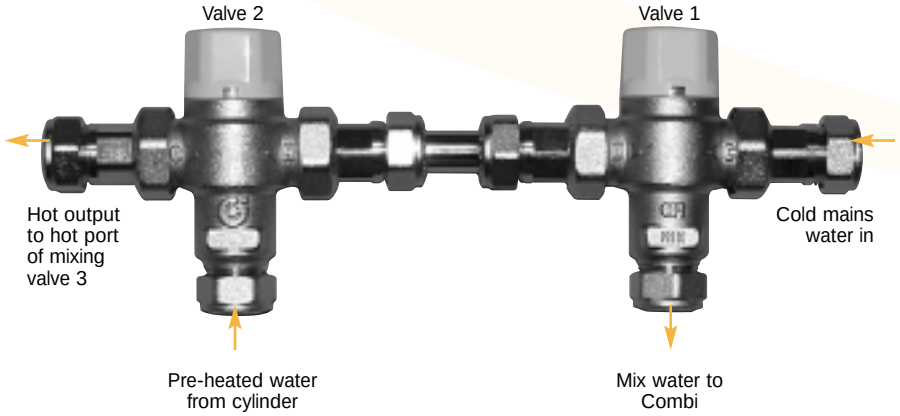
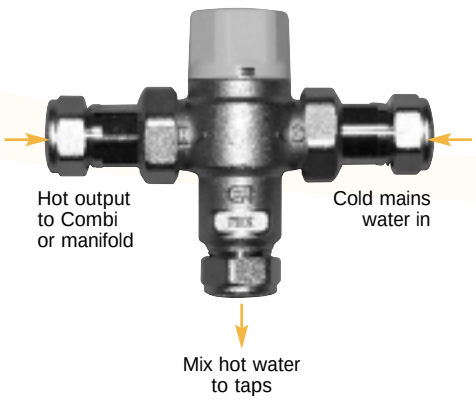


Figure 2:
Hot water mixing valve (Valve 3)



Fit the 15mm compression nut and olive to the two remaining threaded connection on the mixing valve.

Note: This valve will NOT be required if a thermostatic mixing valve is already fitted in the water supply to the hot taps, e.g. in Scotland.

Location

Please note that in Figure.3. and Figure.4. the manifold and mixing valve are shown installed vertically, one above the other. This is not essential and they can be positioned in any orientation to suit the existing pipework arrangement. Ensure that all connections to both the manifold and mixing valve are readily accessible should it be necessary to remove them for servicing at any time.

IMPORTANT. Do NOT interchange or attempt to adjust any of the valves, however temporary. Each valve has been designed, manufactured and set to perform a specific function. Failure to follow this instruction will invalidate the product warranty and may cause an unsafe condition to occur.

With an existing hot water system, the layout may be such that the Combi boiler and the pre-heated hot water store may not be in the same area. If the manifold and mixing valve are installed adjacent to the store, this would result in an unnecessary pipe having to be installed to take the hot from the Combi back to the mixing valve.

This can be avoided by locating the mixing valve closer to the Combi – refer to Fig.4. The T-piece can be located anywhere on the pipe between the hot outlet from the Combi and Port C on the manifold (Valve 2). Wherever it is located, ensure that mixing valve is readily accessible should it be necessary to remove it for servicing at any time.

Note: If local Regulations require the use of thermostatic mixing valves to control the hot water temperature at every point of use, the Hot water mixing valve supplied with the Grant CombiSOL system can be used as one of these valves.

Scale prevention

As with all components connected to the water supply, there is a risk of lime scale contamination in hard water areas. Precautions must be taken to prevent lime scale build-up in the Grant CombiSOL valves. Any failure of the valves due to lime scale is not covered by the product warranty.

Figure 3:

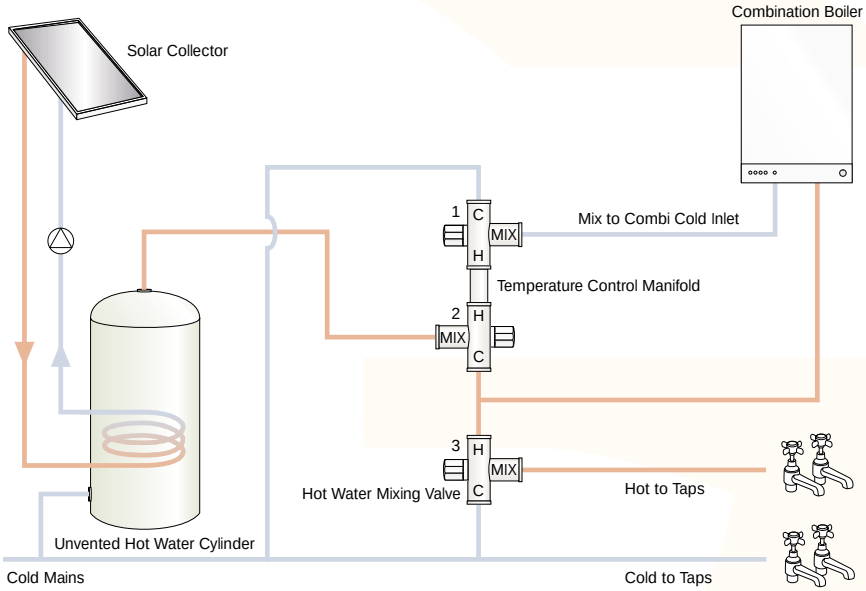
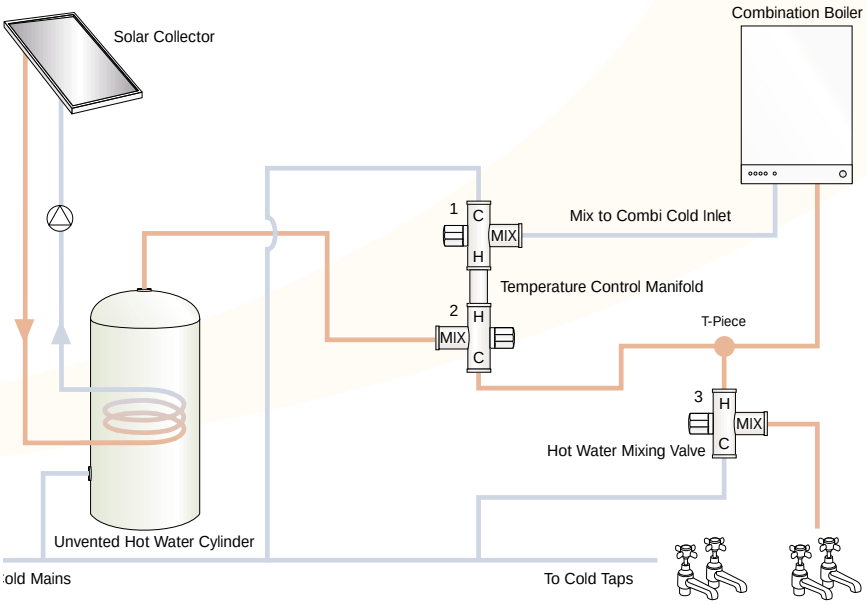


Figure 4:



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