

WARM WATER UNDERFLOOR HEATING

installation manual

1.3 System components – Plumbing

Water supply module

This assembly may be connected right- or left-handed and consists of:

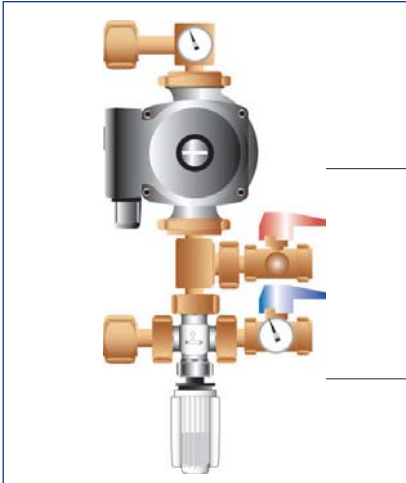
Floor heating pump

The floor heating pump circulates the hot water from the boiler into the Optiflo manifold and around the floor heating tube.

Water temperature control valve

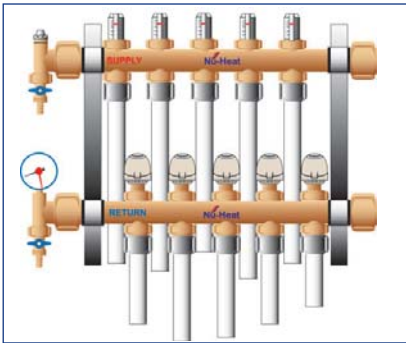
The floor heating temperature control valve regulates the temperature of the water flowing into the Optiflo manifold. It mixes colder water returning from the floor heating tubes with the hotter water coming from the boiler to create the temperature set on the valve head.

See Section 1.5.



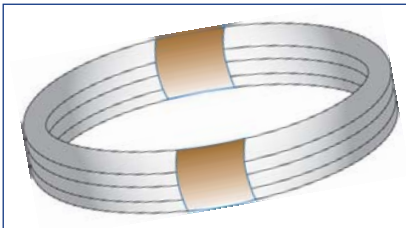
Optiflo manifold – may be connected right or left handed

Optiflo manifolds are connected to the water supply module. When hot water is required by the underfloor heating system, a valve on the manifold opens and hot water is pumped through to the tubing in the floor. The flow rate of the water is shown on a flow gauge on the manifold. When the air temperature of each room reaches the required level, the wall thermostat switches off its corresponding zone valve on the manifold. Manifolds are available with up to 9 ports. See Section 1.5.



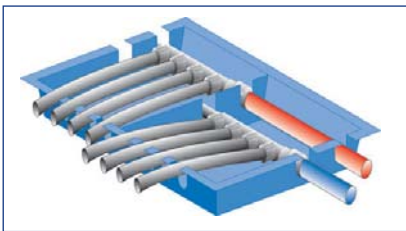
18mm Alupex flow and return pipe (10mm Fastflo® systems only)

This larger, aluminium-cored piping runs between the Optiflo manifold and the 10mm Fastflo® tube distributor assemblies in the floor. It is important to label each length of piping correctly with its zone number and room name when it is connected to the manifold as they must be clearly identified in order for the wiring to be successfully completed. See Section 1.5.



Distributor assembly and box (10mm Fastflo® systems only)

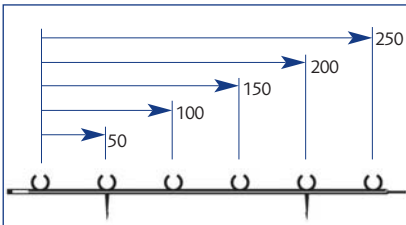
Distributor assemblies take water from the 18mm Alupex pipe connected to the Optiflo manifold and direct it to 10mm Fastflo tubes in individual room zones. They can be joined and fitted side-by-side to provide additional ports as specified on your individual system design. They are supplied with blanking plugs for unused ports. A moulded box is provided for use in screeded floors to protect internal components. Further information can be found in Section 7.



Cliptrack

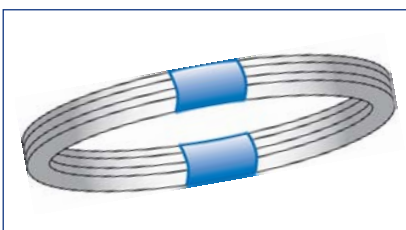
Cliptrack is used to secure Fastflo tube in place on the floor. The tubing is held at the correct spacings to ensure the room reaches its set temperature efficiently, note that these spacings are detailed on the system design as they may vary from room to room. Cliptrack can also be used when fitting tubing from below to first floor suspended timber floors. Details are included in Section 7.

Note: Design of Cliptrack may vary according to floor type and pipe size.



10/14mm Fastflo & 16mm Alupex floor tube

This is the tubing which runs warm water under the floor. It is either connected to the flow and return ports of the distributors (10mm systems) or directly to ports on the Optiflo manifold (14/16mm systems). The number of coils of tube and the spacing used in each zone are noted on the system design. Detailed instructions on how to lay the tubing in different floor constructions are included in Section 7.



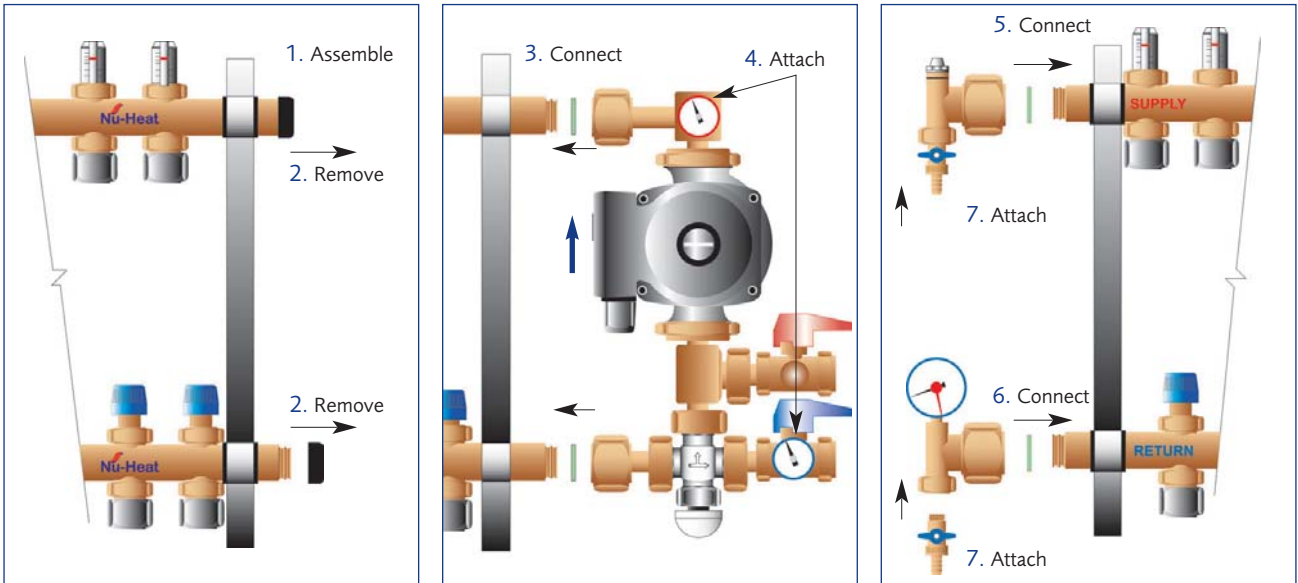
1.4 Installation details

For installation details referring to the specific floor types and underfloor heating tube layouts within your property, please refer to the system design in Sections 7.1 and 7.2.

1.5 Optiflo manifolds

Optiflo manifolds are supplied boxed and should be assembled as shown. All the necessary brackets, connecting and fixing components are included.

Note: Optiflo manifolds can be assembled to accept the flow and return pipework from either the left or right to suit the system design.

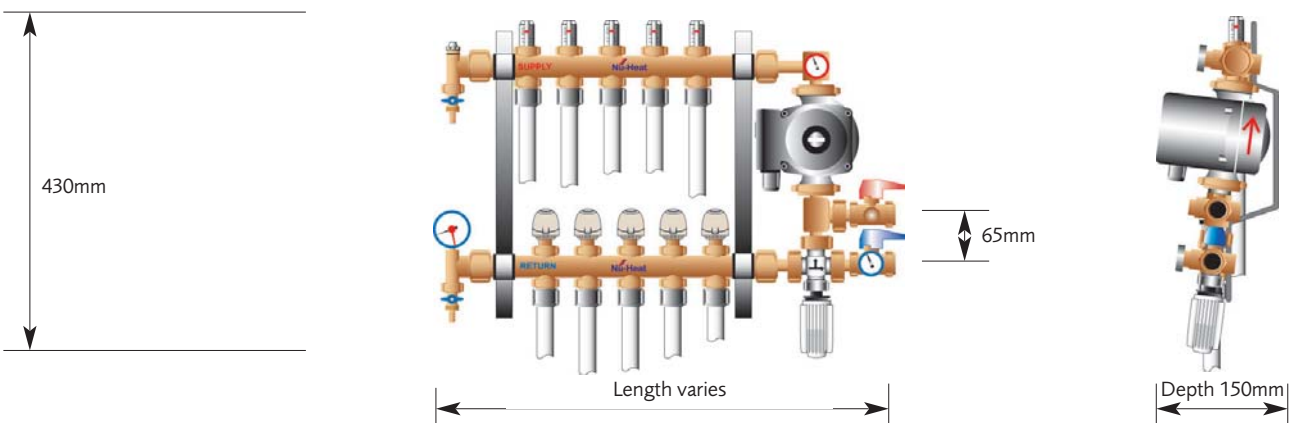


Assembly

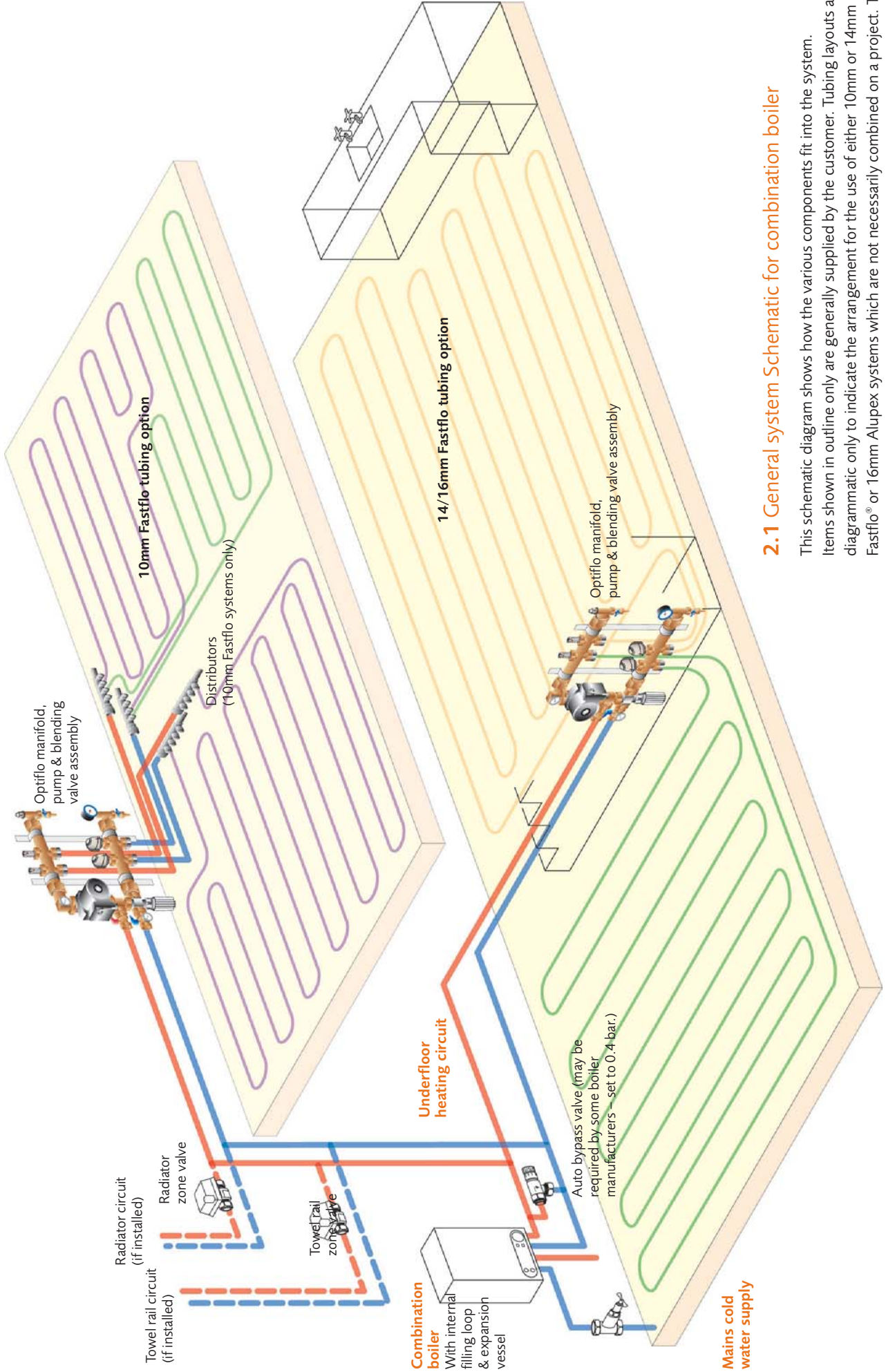
- The manifold should be assembled with the offset brackets as shown below and so that the flow gauges are positioned vertically at the top of the manifold as illustrated.
- Remove the **black** protection covers from the ends of the upper and lower manifolds and discard. The blue zone valve covers must be retained.
- Connect the water supply module. The water in the pump must flow upwards as shown by the arrow on the side.
- Push the temperature gauges fully into the phial pockets and tighten the grub screw on the 'return' temperature gauge. **Note:** The flow temperature gauge is positioned on the discharge of the pump and should face to the front.
- Connect the air vent assembly to the upper manifold.
- Connect the pressure gauge assembly to the lower manifold; if necessary, rotate the assembly so that the gauge faces forward.
- Connect the drain valves to the bottom of the air vent and pressure gauge fittings using the O-rings provided.

Positioning

Place manifolds where they are easily accessible as settings may need to be changed. The size of manifolds varies depending on the number of room zones being connected and the cupboard or casing needs to be big enough to cater for this. As a general guide they are placed centrally within the building. See the system design for detailed positioning.



Number of ports:	2	3	4	5	6	7	8	9
Length in mm:	430	470	510	560	620	670	720	790



2.1 General system Schematic for combination boiler

This schematic diagram shows how the various components fit into the system. Items shown in outline only are generally supplied by the customer. Tubing layouts are diagrammatic only to indicate the arrangement for the use of either 10mm or 14mm Fastflo® or 16mm Alupex systems which are not necessarily combined on a project. The illustration is not drawn to scale. Please refer to system design for system specification information.