

Thermostatic Mixture System or Thermostatic Control Group Installation and operation instruction

DATA SHEET

ZL-2546



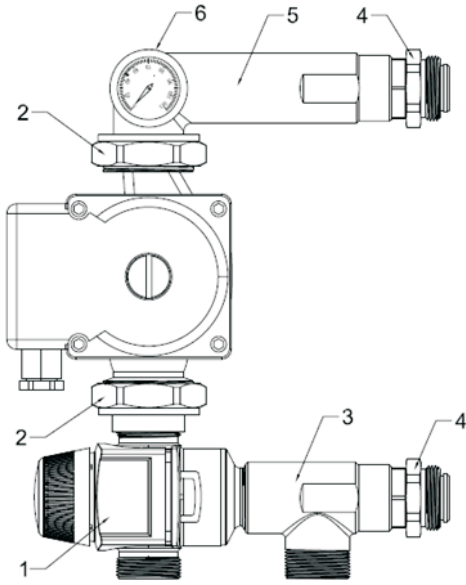


Description

1. This control group has been designed for control of flow and water temperature in an under floor heating system. It is pre-assembled and tested to ensure the users can operate it immediately once fitted, and it can show the corresponding temperature clearly.
2. As supplied it is designed to connect to the left hand side of a manifold with 210mm between the centers of the flow and return arms. It can also be used with any other manifold built on this dimension. The control group can also be altered to fit to the right hand side of a manifold simply by removing the bracket clips and turning the control group elbows through 180 degrees using the union fittings at the top and bottom of the pump. The pump motor may need to be rotated through 180 degrees to minimise the space occupied by the control group.
3. There are two other control groups to cater for applications with different control needs or higher flow rates for larger residential applications

Performance

Maximum static pressure	10bar
Maximum differential pressure	3bar
Inlet Temperature	1-95°C
Outlet temperature	35-60°C(Default value 40°C)
Temperature control precision	±2.5°C
Flow speed	0.25~0.4m/s
Once supply rated flow	1200L/h
Second supply rated flow	300L/h
Maximum working pressure	0.8Mpa
Noise	≤45db(decibel)
Protection grade	IP44
Overall dimensions(L,W,H)	311mm*189mm*133mm
Surface	Nickel Plated Supporting bracket With rubber supports for extrastability and noise reduction



Technical Specifications

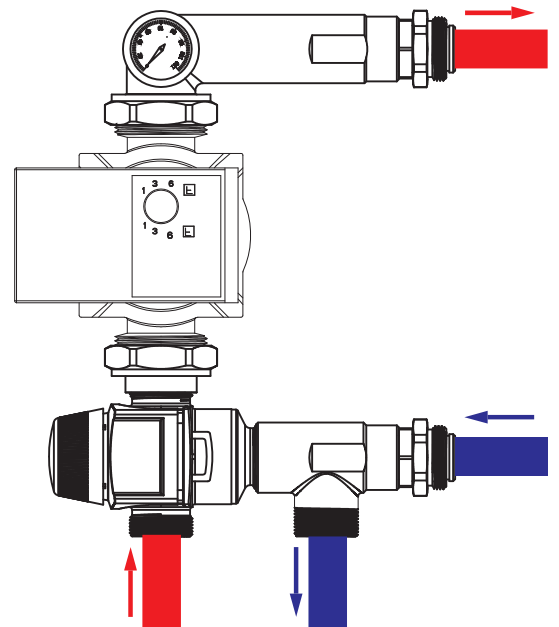
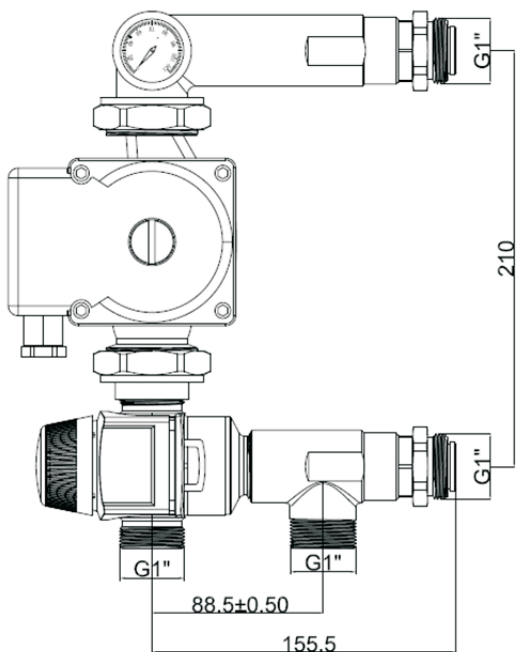
Materials

Body	Brass
connections	Brass
Hand wheel	PA
Seals	EPDM
Spring	Stainless steel

NO Components

1	Thermostatic Mixing Valve
2	Joint
3	three-way assembly
4	Mixing Valve joint
5	Mixing Valve elbow
6	Temperature Gauge

Dimensions



Connect way: 1" M swivel joints for fast connection to 1" F manifold tapings

Pump connection: 1 1/2"-130mm Connector

Please note the overall dimensions of the control group and allow reasonable access at either side and the front for installation and maintenance Main application range: central heating +under floor heating boiler+ under floor heat in radiator and under floor heating control group

- (1) Before install, it should to check the pipeline system thoroughly, check if the connection is reliable, and ensure the pipeline without impurity, welding slag and dirt. Especially welding with the PPR pipeline in North, it needs to ensure the flow cannot too small after welding. Remove the control group assembly carefully from the packaging and check to ensure that all components are in place and that there is no damage to them.
- (2) It need to install with valves on the supply and return, it for easy to maintain and preserve, and it need to install the filter on supply way, as far as possible to add the pressure balance valve and reducing pressure valve to protect the pump. Be possible to use horizontal inlet if condition allow, secondly to use under inlet.
- (3) Connect the inlet and return correctly. The control group should be installed at the dry ventilated place, to avoiding the short circuit of be affected with damp, it's better to have floor drain nearby.
- (4) The control group should be installed at the dry ventilated place, to avoiding the short circuit of be affected with damp, it's better to have floor drain nearby.
- (5) Except the user and the debugging personnel using and debugging the thermostat and plastic parts, it should perform as the electricity common senses strictly, cannot touch other metal parts to avoiding burns and other accidents.
- (6) When the user needs to adjust the temperature, it only needs to rotate the thermostatic handle.
- (7) In order to install correctly, please pay more attention to the flow direction as the products' marking; please make sure the valve from floor above 30cm and horizontal installation.
- (8) The control group can be changed to be supplied from the left hand side of the manifold to be connection to the right hand side as following:



- 1 Remove the mounting bracket clips from the control group by unscrewing the two screws shown in Fig. 3 and rotating the upper and lower elbows through 180 using the pump union nuts.
- 2 Using a 5mm hexagonal key, remove the four motor retaining screws, rotate the motor 180 degrees and retighten the screws.
- 3 With the motor re-positioned, rotate the pump so that the motor sits again between the upper and lower elbows and then refit the mounting bracket and fix it. See Fig 4.
- 4 The control group can be attached to the manifold either before or after the manifold is secured to the wall. The control group should be secured to a flat vertical surface able to support the weight of the control group and manifold. Using the dimensions shown in Figs. Fig 4 1 and 2, ensure that there is sufficient space for installation and maintenance at the intended position for the control group.



5. The inlet tee swivel joint should be connected to the return rail and the outlet elbow swivel joint to the flow rail of the manifold. Carefully offer up and screw the swivel joint

threads evenly into the manifold using a 37mm A/F spanner, use O ring sealing to connect and pay more attention that don't tightening excessively.

6. After the control group connected with the manifolds, fixed on the wall and test if all is ready completely. Suggest the control group connect the pipeline with 1 "ball valve for easy to debugging and maintenance without water seepage.

7. The return end of mixing valve with non-return valve inside, allowing return water from the top to the inlet end, cannot channeling water from the inlet end to the return end directly.

Commissioning and install of pump

1. The pump is supplied with a pre-connected 1 m long 3-core cable ready for connection to the electrical controls system. Ensure that the pump is filled and vented, operate the controls system to call for heat then select the desired pump setting control panel and operating dial.

2. The control panel is at the front of the pump. It has one dial with 3 operating modes as shown in Fig.5 below, see above. The "POWER ON" light field around the dial shows that the mains supply has been switched on.



3. Once the system has been filled and pressure tested, the individual under floor circuits can be balanced. As part of this process the mixed flow temperature must be adjusted to the correct level for the system design. To achieve this, the thermostatic mixing valve can be adjusted between 20°C and 60°C as shown in Fig.6. Allow sufficient time for the temperature to stability, then check the setting against the temperature reading on the mixed flow temperature gauge fitted to the control group.

Setting Number	1	2	3	4	5	6
Temperature °C	37	42	47	52	56	60



Please retain this document and hand it to the user for future reference.