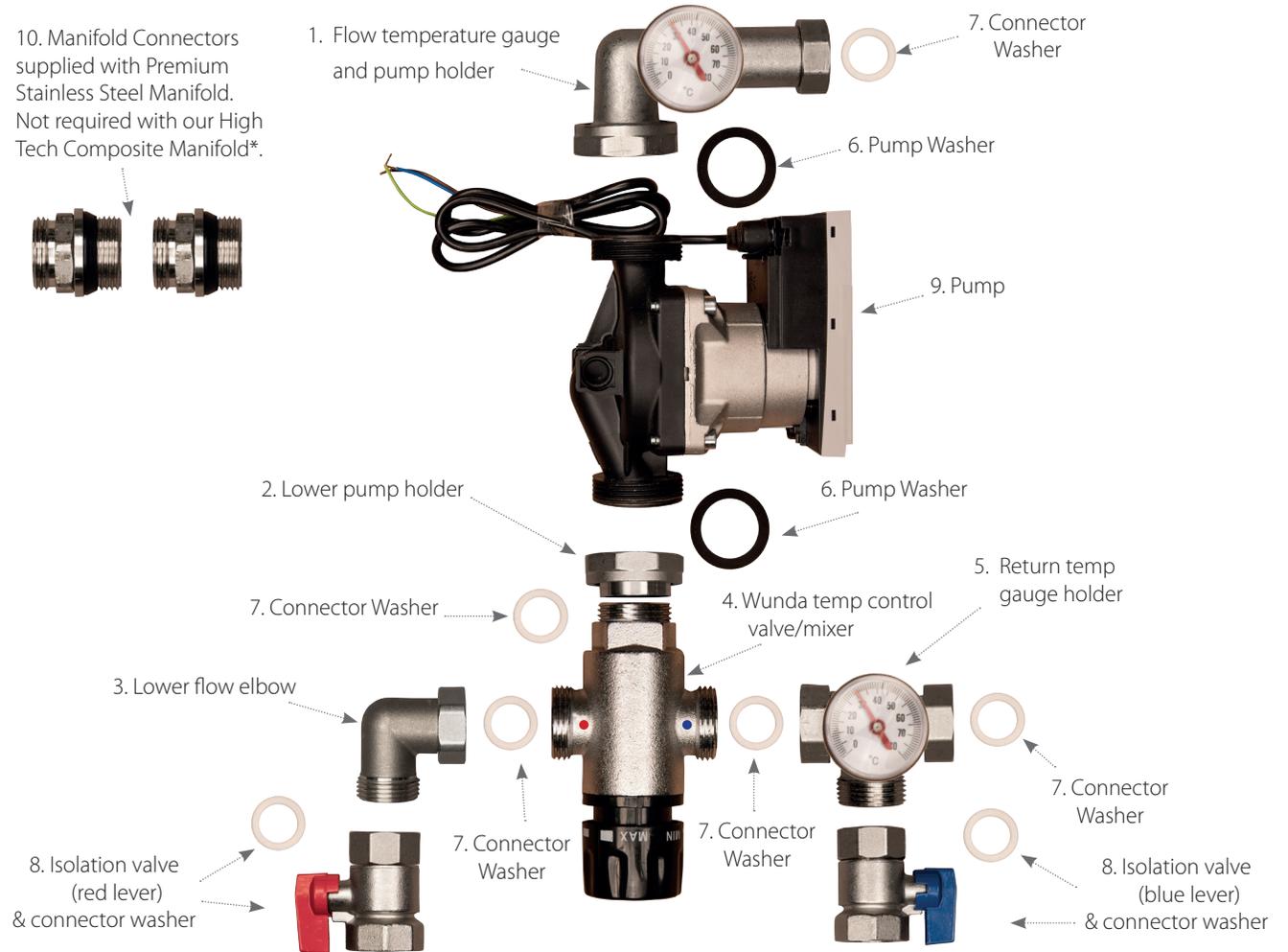


**Before you start:** Please check the manifold and pumpset box contents against the images and list below.

**Check the contents**

1. Flow temperature gauge and pump holder
  2. Lower pump holder
  3. Lower flow elbow
  4. Wunda temperature control valve/mixer
  5. Return temperature gauge holder
  6. Pump washers x 2
  7. Connector washers x 5
  8. Isolation valves – pair (optional extra) with connector washers x 2
  9. Pump
  10. Manifold connectors x 2\*
  11. Additional support bracket\*\*  
Supplied with High Tech Manifold sets only.
11. Pumpset bracket - High Tech manifolds only\*\*



# WUNDA

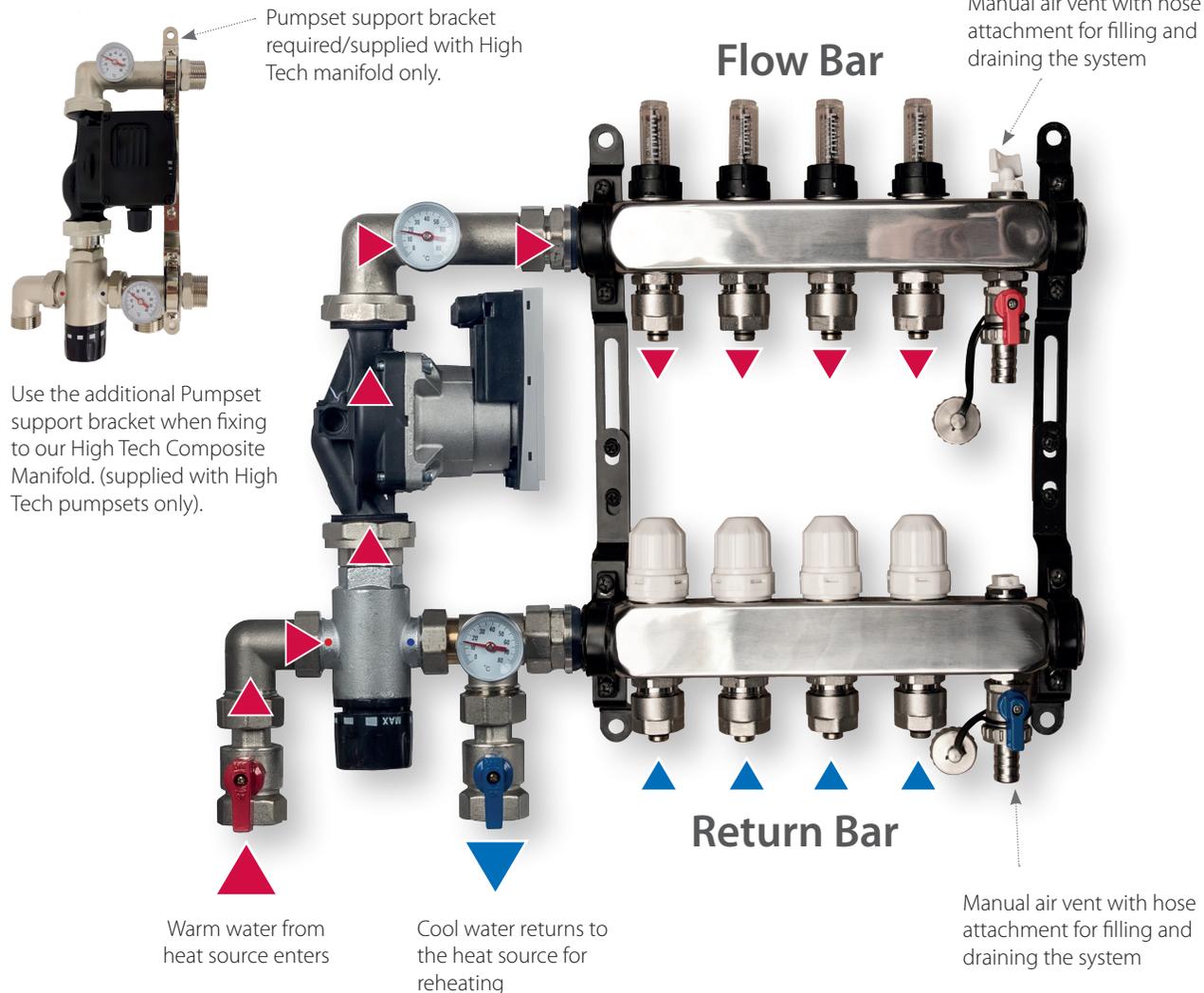
THE BRAND YOU CAN TRUST

## Wunda Pumpset

0800 5420 816

www.wundatrade.co.uk

# M06



## Understanding how the manifold & Pumpset work

Warm water is pumped from the heat source to the manifold and pumpset assembly. If the system requires a top up of heated water, the temperature control valve will allow more heated water into the floor heating system via a one-way valve or release cooled water back to the heat source for re-heating.

Temperature input is easily increased or decreased by turning the mixer valve control head. Clockwise closes the valve and decreases the flow temperature, anti-clockwise opens the valve and increases flow temperature (see page 6).

From the upper flow bar, warm water is distributed to each loop of floor heating pipe via an adjustable flow gauge. The water then returns via the return valves into the lower return bar.

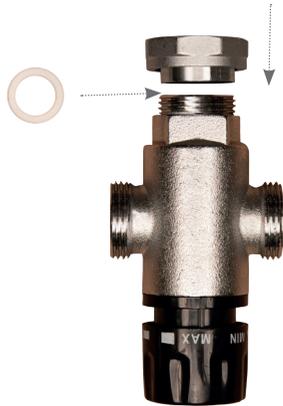
When the room reaches the required temperature the room thermostat sends a signal to the wiring centre to switch off the circulating pump and close the actuators. This shuts off the water supply to the loops of pipe in the floor and therefore shuts off the heat supply to that zone.

Before assembly of the manifold, pumpset or pressure testing, familiarise yourself with the various stages of assembly and the relevant fact sheet. We also advise to watch the online tutorials and technical support videos.

**Free technical support call 0800 083 2677**

Identify and familiarise yourself with each individual component. Assembly of the pump set and pump is recommended on the bench prior to fitting the complete unit to the manifold. The use of PTFE tape is not required when the supplied washers are fitted correctly, however if you wish we recommend the use of a liquid PTFE.

- 1 First connect the lower pump holder onto the temperature control mixer ensuring the correct washer is located between the two components.



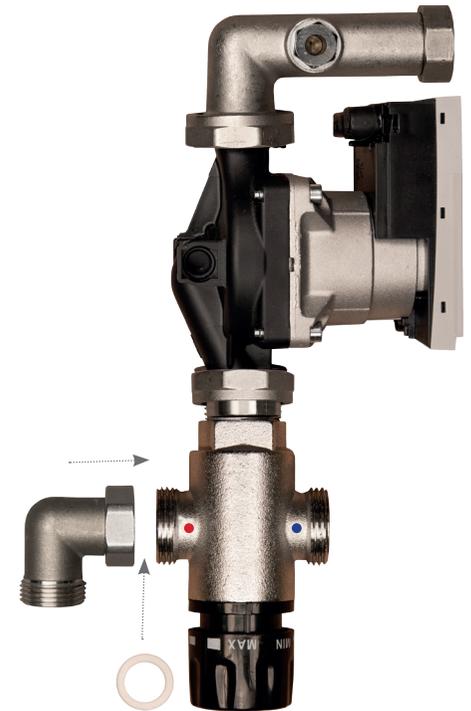
- 2 Select a pump washer (large black washer) and locate into the lower pump holder/ Wunda temperature control mixer. Again tighten by hand taking care not to cross the pump thread.



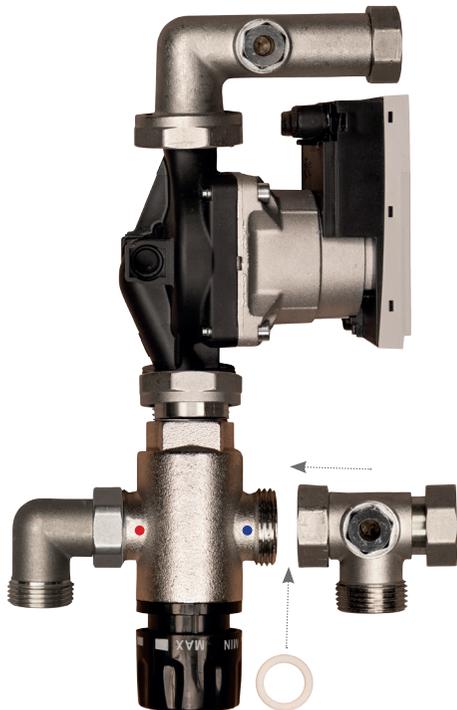
- 3 Select a pump washer (large black washer) and locate into the top flow elbow & pump holder. Tighten the pump holder onto the pump by hand, be careful not to cross the pump thread.



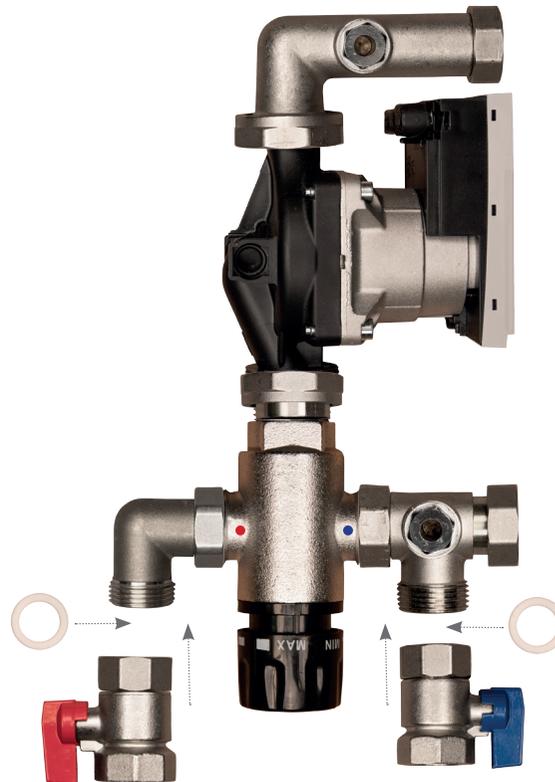
- 4 Fit a washer into the lower flow inlet elbow and screw the elbow onto the left-hand inlet (red dot) side of the temperature control mixer.



- 5 locate washer into the lower return temperature gauge holder and screw onto the right-hand return (blue dot) side of the temperature control mixer.



- 6 Fit the two isolation valves onto the flow and return feeds ensuring washers are fitted correctly, blue tap is fitted to the return (right) and red tap is fitted to the flow (left)



- 7 This pumpset is supplied with flow and return temperature gauges which must be fitted into the flow and return temperature gauge housings.



### Pumpset connection to High Tech Composite Manifold

When connecting a Wunda pumpset to our High Tech Composite manifold the pumpset support bracket must be used to offer extra support for the heavy pumpset. The bracket is adjustable and supplied with 2 x rubber mounts, 2 x brackets, 4 bracket bolts & 2 x adjustable bracket nut and bolts. (Pic A)



5

Insert the 2 adjuster nuts into the long slot from below into the lower bracket. Place the upper section of bracket over the adjuster nuts ensuring the nuts line up with the 2 holes in the upper bracket. The long slot will secure and keep the nuts captive (Pic B).



Screw the adjuster bolts into the captive nuts, ensuring the nuts are retained in the slot. Do not tighten at this stage (Pic C).



The pumpset bracket is now ready to accept the pumpset assembly, the flow bar is mounted to the lower section of bracket and the return bar is mounted to the higher section of bracket. Locate the 2 mounting rubbers, brackets & 4 securing bolts (Pic D).



Wrap the rubber mount around the flow bar and return bar and place a bracket over each of the rubber mounts (Pic E)



Using the 4 bolts tighten and secure the brackets, securing the pumpset to the adjustable support bracket. The pumpset will have a small amount of movement within the brackets which will allow for easier connection. The pumpset is now ready for assembly onto the High Tech Composite manifold. Ensure the supplied washers are used between the pumpset and manifold connections (Pic F).



Once the pumpset has been connected and tightened to the manifold, the bolts on the adjustable bracket can be tightened (Pic G) *Manifold not included in Pumpset contents*

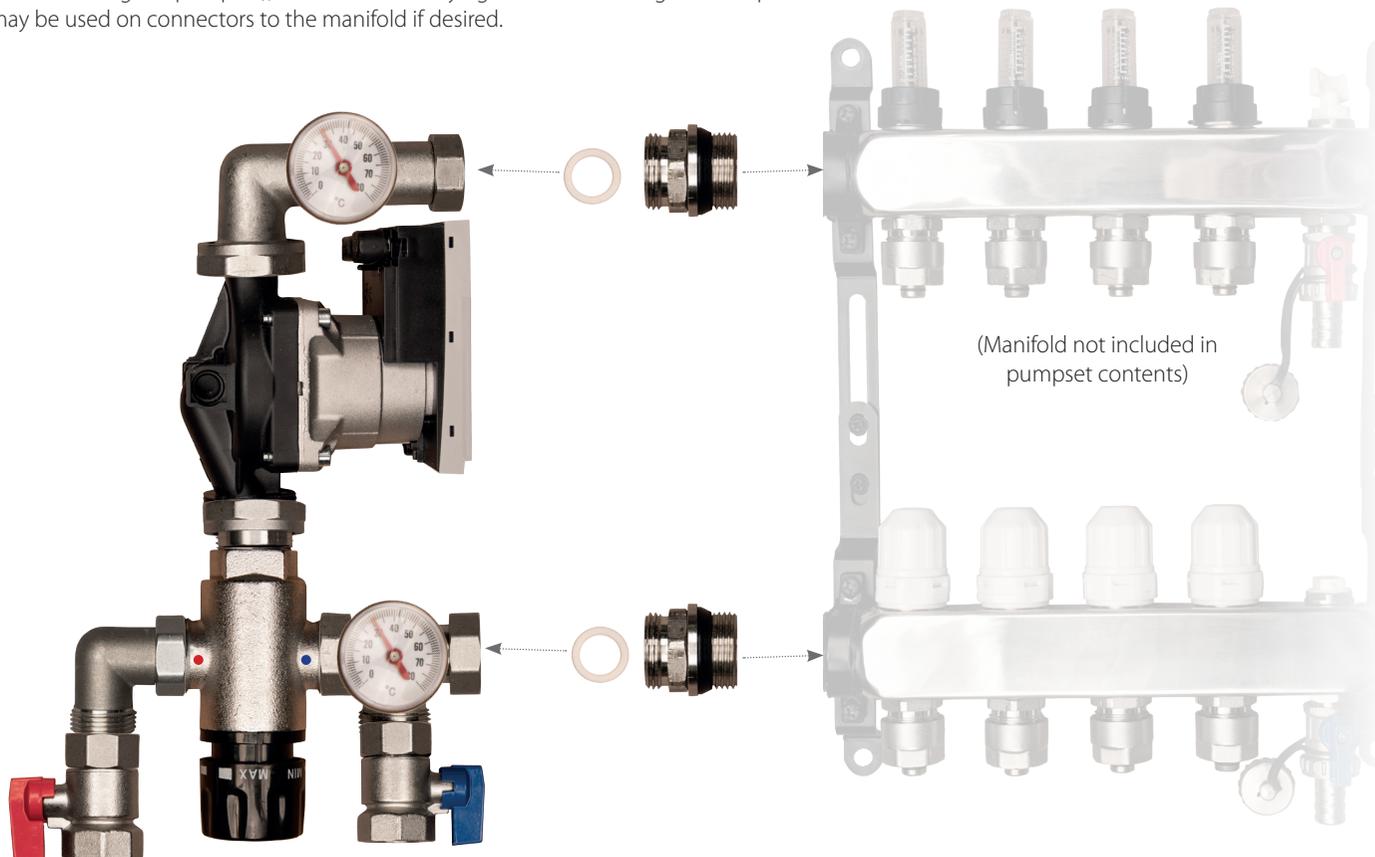


### Pumpset connection to Premium Stainless Steel Manifold\*

8 Two pumpset to manifold connectors are supplied and will need fitting to the left hand side of both the flow and return bars (we recommend fitting these connectors to the manifold bars **before** connecting the pumpset), these must be fully tightened at this stage. PTFE tape or liquid may be used on connectors to the manifold if desired.

When connecting the pumpset to the manifold ensure the supplied washers are fitted to both the flow and return of the pumpset.

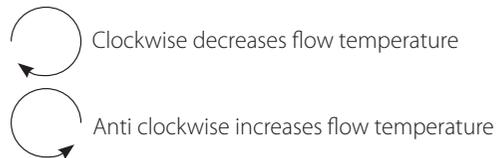
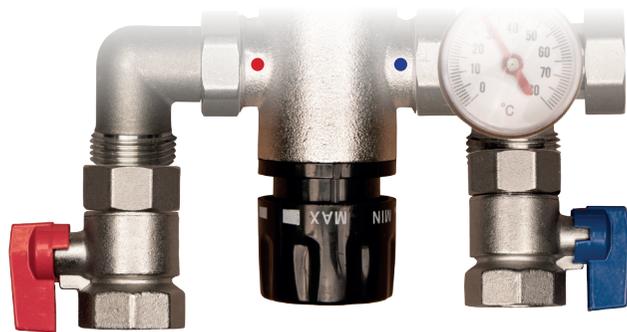
Loosely attach to the return connector and then the flow connector by hand, once both have been connected then fully tighten using a suitable spanner.



\*For pumpset connection to High Tech Composite manifold please refer to relevant section

### Flow temperature setting.

To protect final floor finish and have the correct settings for floor constructions, the mixer valve must be set correctly. Flow temperature input is adjusted by turning the black temperature control knob. Clockwise reduces flow temperature and anti clockwise increase flow temperature. Temperature range 30 - 70° C



Adjust the flow temperature to suit the floor construction and floor finish.

Flow temperature is indicated by the temperature gauge on the top flow elbow.



### Guidlines for different types of floor heating

- Pipe in Overfloor panel systems 35°C\*.
- Pipe in Solid screed construction (staples, cliptrack, multipanel) 45°C\*.
- Pipe in Joisted floor construction (spreader plate, foiltec) 65°C\*.

Check with floor finish suppliers before introducing warm water into the floor heating system as some flooring materials, in particular wood, require limiting of floor surface temperatures. Floor surface temperatures can be automatically controlled with the installation of our floor probe and correct thermostat programming.

A flow and return temperature differential of approximately 7°C is preferred. However flow input temperatures may need to be increased or decreased seasonally in extreme weather fluctuations to adjust system performance.

# PLEASE READ: Important set-up info

In some cases, if the pump circulation speed and flow meters are not set up properly, the premium mixing valve may whistle. To avoid this, check you have covered the following points during installation.

## MANIFOLD SIZE:

**2-4 ports** - total floor heating pipe length of up to 400 metres, the pump should be set at **no higher than speed 1**

**4-8 ports** - total floor heating pipe length of up to 800 metres, the pump should be set **no higher than speed 2**

**8-12 ports** - total floor heating pipe length of up to 1200 metres, the pump should be set **no higher than speed 3**

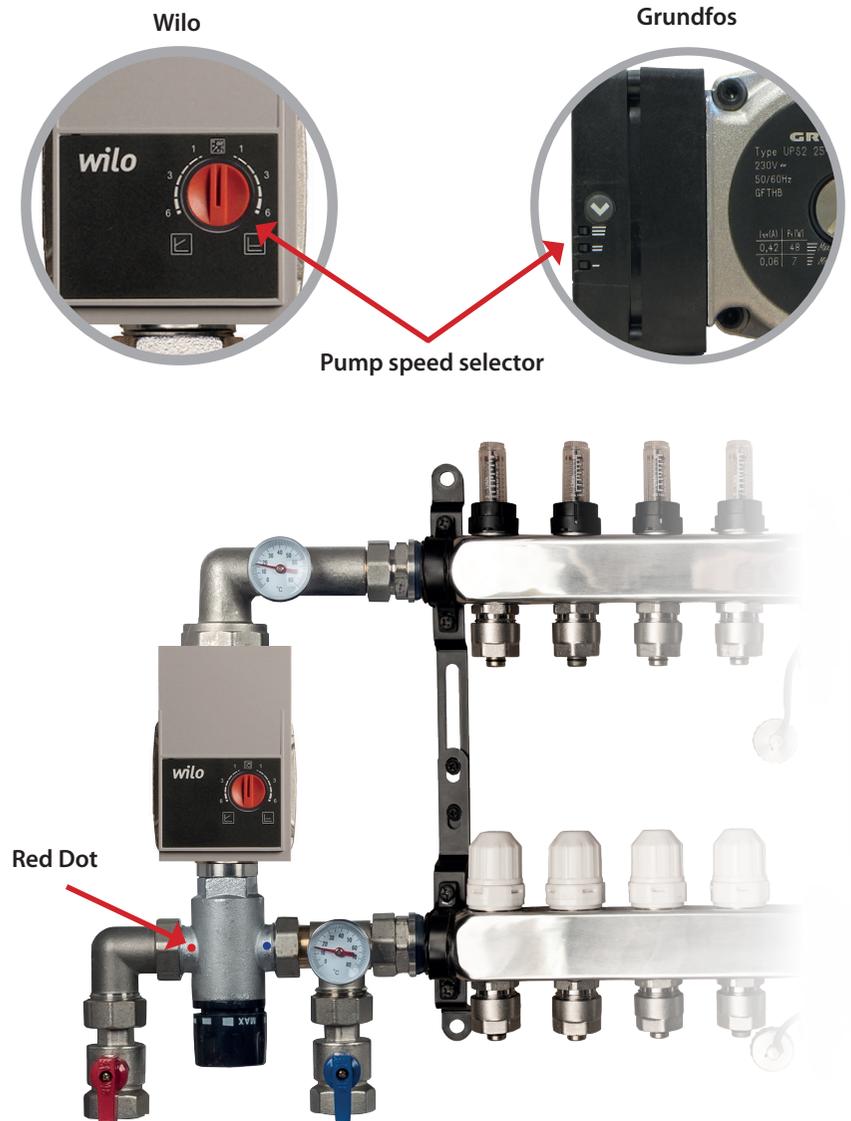
## FLOW RATES:

Each flow meter should be set up to harmonise the flow rate of each loop with the system - please follow the instruction laid out in **Fact Sheet M07 page 6** (downloadable from [www.wundatrade.co.uk/factsheets/](http://www.wundatrade.co.uk/factsheets/)) or see the online video.

## OTHER THINGS TO CHECK:

- Check that the red dot of the mixer valve is connected to the **flow**
- Check that your feed and return pipe sizes meet the requirements of the manifold.
- Make sure your isolation valves are fully open

**Please call tech support should you need any further guidance**



## Supplementary information.

### Floor surface temperatures

Before introducing heat into the floor heating system check with the final floor finish supplier about maximum floor surface temperatures.

Generally a maximum floor surface temperature of 29°C should not be exceeded however many wooden floor finishes have a maximum floor surface temperature of 27 °C and must be laid in conjunction with relevant underlay and moisture barriers.

We advise the use of floor probes in conjunction with room thermostats be used in order to limit floor surface temperatures and avoid damage to chosen floor finish.

In particularly large areas several probes and thermostats may be required.

### Wooden floor coverings

When installing wooden floor coverings over floor heating the floor surface temperature must not exceed 27 °C. Floor probes in conjunction with room thermostats must be used in order to limit floor surface temperatures and avoid damage to wooden floors. Expansion gaps must be used to allow for expansion and contraction movement of the wooden flooring as specified by flooring suppliers. Birch and Maple are not suitable for use with floor heating due to excessive amounts of expansion. Laminates and engineered woods less than 25mm thick work well with floor heating. All wood flooring products must be acclimatised to the heating system and its operational temperatures by following suppliers guide lines.

### Water Treatment (required to comply with product guarantee)

Specialist water treatment suppliers such as Sentinal or Fernox will be able to advise on all water treatment issues and dosage requirements. Flushing should be in accordance with BS:7593 to ensure awareness of the preparation of the water circuit for the wet heating systems prior to initial commissioning following major remedial work such as boiler replacement and the ongoing water

treatment to ensure continued efficiency. The water volume in a 16mm pipe Floor Heating system can be calculated by multiplying the total linear length of Floor Heating pipe by a factor of 0.113 this will give the volume of water in litres.

In order to minimise corrosion, treatment of the water with an inhibitor is essential, however, for a corrosion inhibitor to function effectively, the metal surfaces must be clean. The British Standard Code of Practice BS 7593: 1992 details the steps necessary to clean a domestic central heating system. The Code recognises that it is not possible to clean a system without the application of a cleanser. Different products may be used depending on the nature of the system involved.

The most effective corrosion inhibitors act by reacting with the surface of the metal to produce a protective film in the form of a stable complex. The effectiveness of a given corrosion inhibitor will depend on its concentration.

In a multi-metal system, the product selected should contain a blend of inhibitors such that each metal is afforded good protection. In addition to the usual metals and alloys, e.g., iron, copper, steel and brass, special consideration must be afforded to aluminium.

Normally this metal is protected by a film of aluminium oxide which prevents corrosion in water (or in air), but under acid or strongly alkaline conditions the oxide film dissolves exposing the metal. Some waters found in the UK will give rise to sufficiently alkaline conditions in a central heating system to promote corrosion of aluminium and the gassing associated.

An increasing number of central heating systems contain aluminium so it is advisable that a neutral (neither acid nor alkaline) corrosion inhibitor product is selected in every case.

Consideration should be given to adding antifreeze to the floor heating system especially during the winter months.

### Important

*"When mixed floor solutions are being served from the same manifold, a floor probe must be used in the floor solution with the lower maximum supply temperature. This is to limit the temperature in these floor areas and prevent damage to the floor solution and/or floor finish."*

Wunda Group Plc operates a continuous product development programme to maintain our reputation for quality products and as such we do occasionally modify or amend the specification of our products in line with our strict quality control policy. Maintenance of the floor heating system is straightforward and the pump, manifold, gauges, valves and actuators are designed for continuous operation over many years. Wunda Group Plc recommends regular use of floor heating systems, this will ensure flow gauges, pumps and valves are kept in good working order.

All information in this publication is given in good faith, and believed to be correct at time of going to press. No responsibility can be accepted for any errors, omissions or incorrect assumptions. Users should satisfy themselves that products are suitable for the intended purpose and application.