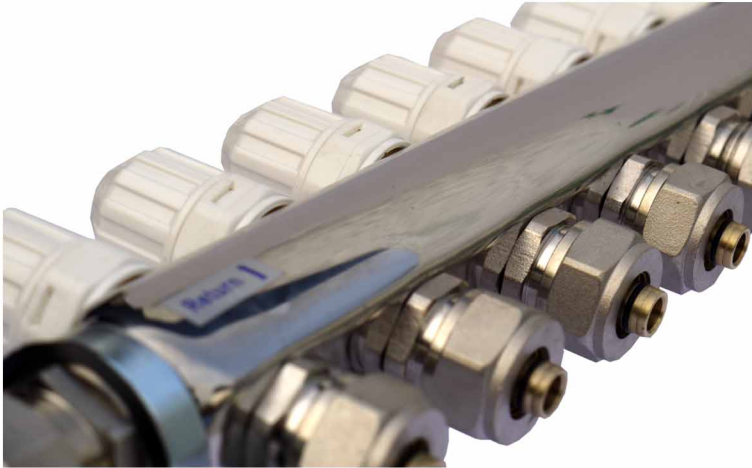




Installation and Maintenance Instructions

Underfloor Heating Manifold Kits



A range of stainless steel manifolds; 2 - 12 circuit's designed for underfloor heating applications

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Section 1 – General Information

Terra Therma UFH manifold kit includes flow and return manifold bars that come pre-assembled to installation brackets and supplied with ball valves, manual air vents, filling / drain points, wall mounting plugs and screws, and identity labels for each zone.

Section 2 – Materials & Specifications

Usual working temperature: 82°C
Maximum working pressure: 3 bar
Maximum working temperature: 105°C
(short term malfunction at 114°C)
Media: Water with corrosion inhibitors present

Manifold body: 304 stainless steel
Isolating Valve Body: Nickel plated brass
Drain Valve / Air Vent: Nickel plated brass
Internal Seals: NBR and EPDM
Flat Face Seals: PTFE
Bracket: Zinc Plated Mild Steel

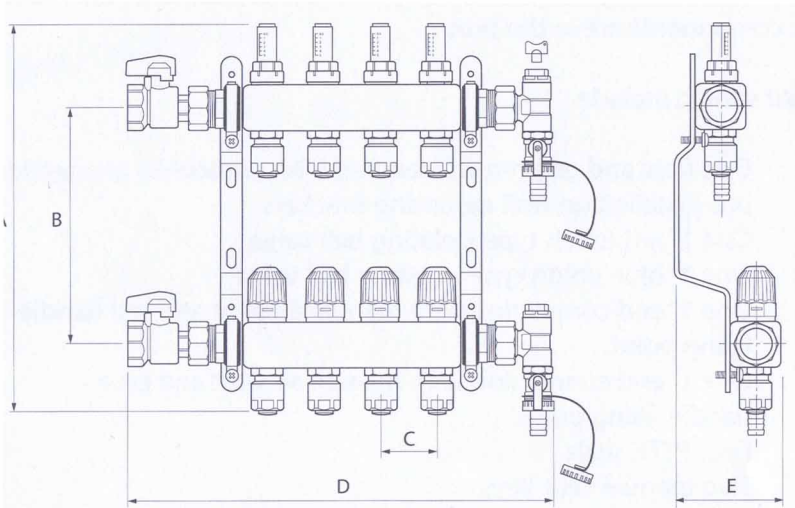
Flow Meters with Isolation

| | |
|--------------------------|---|
| Maximum Static Pressure: | 10 bar |
| Maximum Temperature: | 105°C (short term malfunction at 114°C) |
| Media: | Water with corrosion inhibitors present |
| Flow Rate Range: | 0-5 LPM |
| Connection Fitting: | Nickel plated brass |
| O Ring Seals: | NBR |
| Spring: | Stainless Steel |
| Cover Cap: | ABS |
| Regulator Window: | Plastic |

Circuit Control Valve

| | |
|--------------------------|---|
| Maximum Static Pressure: | 10 bar |
| Maximum Temperature: | 105°C (short term malfunction at 114°C) |
| Stroke: | 3mm |
| Media: | Water with corrosion inhibitors present |
| Connection Fitting: | Nickel plated brass |
| O Ring Seals: | EPDM |
| Washer: | EPDM |
| Spindle: | Stainless Steel |
| Spring: | Stainless Steel |
| Cover Cap: | ABS |

Section 3 - Dimensional Information



| No of Circuit's | A | B | C | D | E |
|-----------------|-----|-----|----|-----|----|
| 2 | 342 | 210 | 50 | 276 | 90 |
| 3 | 342 | 210 | 50 | 326 | 90 |
| 4 | 342 | 210 | 50 | 376 | 90 |
| 5 | 342 | 210 | 50 | 426 | 90 |
| 6 | 342 | 210 | 50 | 476 | 90 |
| 7 | 342 | 210 | 50 | 526 | 90 |
| 8 | 342 | 210 | 50 | 576 | 90 |
| 9 | 342 | 210 | 50 | 626 | 90 |
| 10 | 342 | 210 | 50 | 676 | 90 |
| 11 | 342 | 210 | 50 | 726 | 90 |
| 12 | 342 | 210 | 50 | 776 | 90 |

All dimension are shown in mm unless otherwise stated.

Section 4 – Pack Contents

Before commencing the installation please check that all of the manifold pack components are in the box.

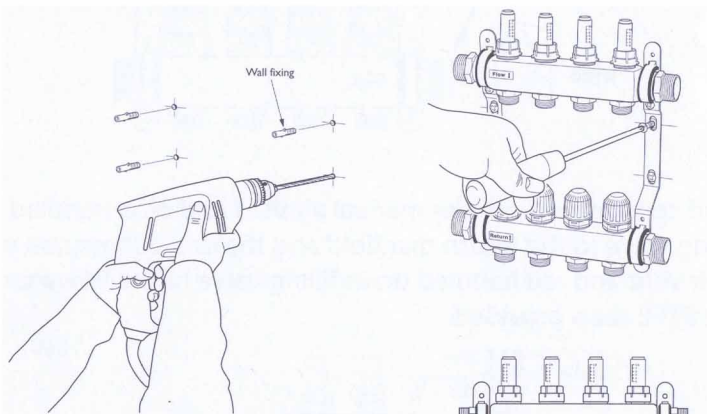
The kit should include :

- One flow and one return manifold with 16mm connections pre-installed on wall mounting brackets
 - One red union type isolating ball valve
 - One blue union type isolating ball valve
 - One end connection with manual air vent and red handle filling point
 - One end connection with manual air vent and blue handle filling point
 - Four PTFE seals
 - Two manual vent keys
 - One sheet of identity stickers
 - Wall plugs and screws
 - Automatic air vent
 - Pressure gage
-

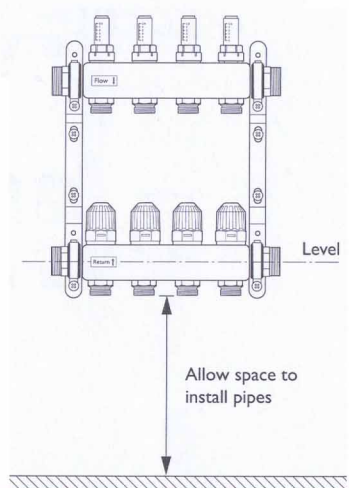
Section 5 - Installation Guidance

Before installation the flow manifold bar needs to be twisted around so the flow gauges are on top with the connections below (as per pictures) to do this loosen the securing screws, twist the bar to correct orientation and re-tighten the screw. The manifolds are packed in this way to protect the flow gauges whilst in transit.

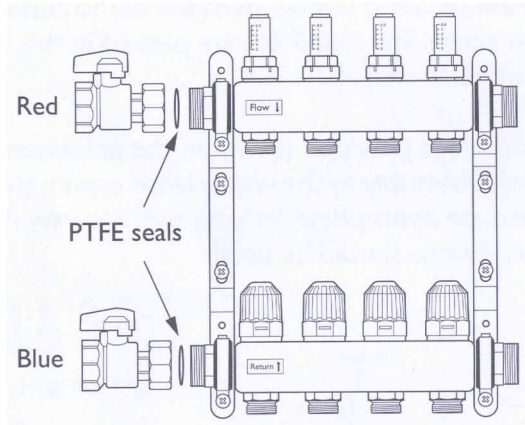
Use the screws and plugs provided to mount the pre-assembled flow and return manifold assembly to the wall (please ensure that the screws and plugs provided are appropriate for your wall construction, if not alternative suitable fixings should be used).



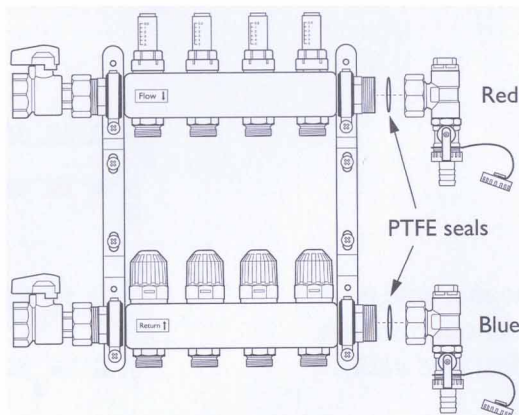
Make sure that the manifold is level and that it is high enough so that the pipes can be installed easily.



Fit the blue handled union ball valve to the return manifold and the red handled union ball valve to flow manifold using the PTFE seals provided.

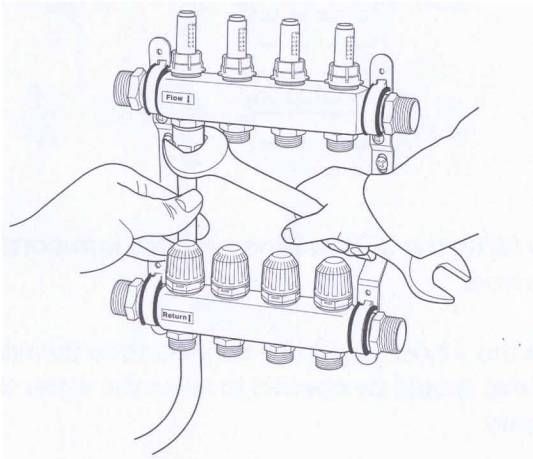


Fit the end connection with the manual air vent and blue handled drain/filling valve to the return manifold and the end connection with the manual air vent and red handled drain/filling valve to the flow manifold, using the PTFE seals provided.

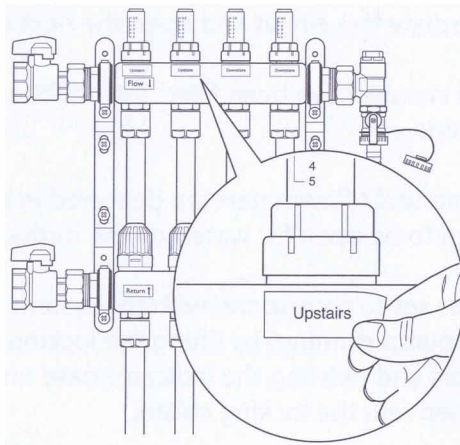


Please note: The blanking plugs should be fitted on the drain/filling valve.
The manifold is now ready to have the flow and return pipes and the UFH temperature control unit attached.

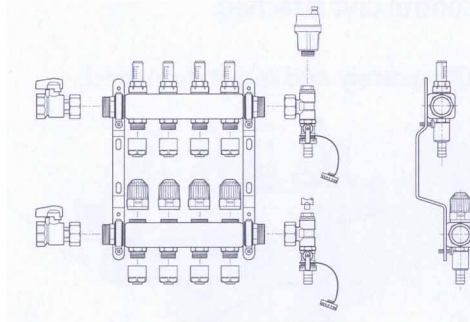
Ensure the tube is cut squarely and is not damaged.



After the installation is complete the identity stickers can be used (if desired),
to identify which zone each loop of pipe serves.



Section 6 - Commissioning



When initially filling the UFH system it's important to remove the air in the pipework.

In order to do this a hose should be connected to the upperfill valve and the bottom valve should be opened to allow the water to be flushed into a bucket or drain.

First isolate all but one of the heating circuits by turning off the relevant decorators caps.

Next flush out the open circuit with clean water until it runs freely from the bottom valve. Isolate this circuit and open the next one.

Repeat this until all circuits have been filled. Introduce any inhibitor or antifreeze at this stage.

PLEASE NOTE: The manifold flowmeters are delivered in the closed position, these need to be open for water to flow through the loops.

Flow rates should be set to correspond with the system design. This is achieved (with the pump running) by lifting the locking collars at the base of the flow indicators and twisting the indicator base until desired flow is indicated, Then refit the locking collars.

DO NOT: Twist the glass as this will completely remove the gauge, this is designed only to be removed for cleaning purposes, and when the flow has been isolated

Section 7 - Spares & Pipe Connections

Spares

- SKIT 450 001 : Manifold Ball Valve - Red
- SKIT 450 002 : Manifold Ball Valve - Blue
- SKIT 450 003 : Manifold Bleed Valve, Includes Key
- SKIT 450 004 : Drain/Filling Valve - Red
- SKIT 450 005 : Drain/Filling Valve - Blue
- SKIT 450 006 : Manifold Tee Piece 1/2" x 1" x 1/2"
- SKIT 450 007 : Manifold Flow Meter
- SKIT 450 008 ; Manifold Circulating Isolating Valve
- SKIT 450 009 : Manifold Blanking Cap
- SKIT 450 010 : Manifold Thermoelectric Head
- AVEN 450 001 : 1/2" UFH Air Vent

Euroconus Connections

- MFIT 100 001 ; Euroconus Fittings 15 x 2.0
- MFIT 100 002 ; Euroconus Fittings 16 x 1.5
- MFIT 100 003 ; Euroconus Fittings 16 x 2.2
- MFIT 100 004 ; Euroconus Fittings 17 x 2.0
- MFIT 100 050 ; Euroconus Fittings 14 x 2.0
- MFIT 100 052 ; Euroconus Fittings 16 x 2.25
- MFIT 100 006 ; Euroconus Fittings 20 x 2.0

Note ; Euroconus Fittings can be used with both Multicore and PEX pipe.



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