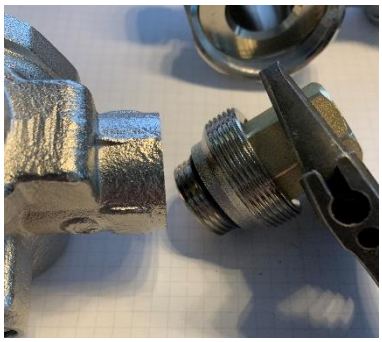
Toplo mixing valve / pump pack information

LH / RH manifold mounting

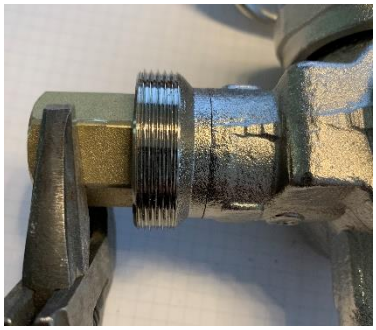
The mixing valve/pump set can be mounted on either the left or ride hand side of the manifold. The components come as standard to fit on the left hand side.

To mount to the right hand side, firstly remove the brackets from the manifold and spin the manifold rails around so that isolation valves are on the right and then replace the mounting brackets. Fix the manifold to the wall before attaching the mixing/valve pump set (it's easier this way)

Take the mixing valve part of the set and remove the male threaded part as shown



Using the brass hex tool, remove the part from the mixing valve as shown. You may need another pair of grips to hold the body of the mixing valve. There are flats on the body to grip, be carefull not to damage any part.



Fit this part into the other side of the mixing valve and tighten using the brass hex tool

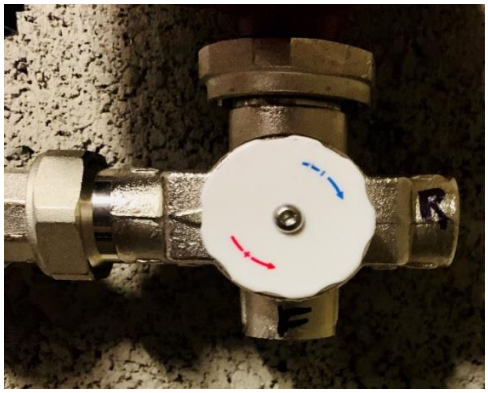
- Take the upper part (gauge housing) of the set and remove the temperature/pressure gauge (by hand)
- Remove the 10mm fitting from the other side and refit the temperature/pressure gauge here, refit the 10mm fitting where the temperature/pressure gauge was originally
- Fit the pump to the mixing valve ensuring the rubber O ring is in between, leave the nut slightly loose and ensuring the arrow on the casing is facing upwards
- Fit the upper part ensuring the rubber O ring is in between, leave the nut slightly loose
- Fit the two male thread connections to the manifold, we strongly recommend the use of PTFE tape or liquid despite there being a seal on this fitting.
- Fit the mixing valve/pump set to the manifold connections, tightening all of the joints by hand first
- Tighten all joints using correct spanners/adjustable wrenches

Elbow / joints to the manifold

We strongly recommend the use of PTFE tape or liquid on the elbow fitting, pipe connections and connections to the manifold (even where there is a seal). The elbow joint is an optional use fitting and it can be used on either the flow or return side of the mixing valve to assist with pipe connections.

Heating connections

The heating system should be connected with the flow in to the bottom connection and the return out of the side (irrespective of RH or LH mounting)



The female connections are ¾" BSP and fittings are widely available for 22mm and 28mm copper. These are often referred to as 'male/iron' or 'number 3' fittings. Please refer to our technical details in this document for the correct pipe size to use.

Flow & return pipe work

Most UFH systems require 1.5-2.5 litres/min flow per circuit and therefore the supply pipework to the manifold (flow and return) should be sized by the heating system engineer/installer with lengths of pipe, bends and resistance calculated to cater for the total demand of the manifold. E.g. a 7 port manifold would require 10.5-17.5 l/min if all circuits are being used. The table below is a **guide only for boiler based systems** and we will not accept any responsibility for calculations of flow and return pipe. We recommend that heat pump flow & return pipe work is 28mm minimum but the heat pump installer may be best to advise on this.

Number of UFH circuits	Flow and return distance	Minimum pipe diameter
2 to 7	<14m	22mm
2 to 7	>14m	28mm
8 to 10	<4m	22mm
8 to 10	>4m	28mm
11 to 12	<15m	28mm

Isolation valves & drain off

We recommend that isolation valves are fitted to the flow and return of the mixing valve so that the UFH can be worked on without the need to drain down boilers etc.

We recommend that a drain off is fitted on the flow pipe to the mixing valve so that the pipework can be vented at initial commissioning and/or if any work is done on the overall boiler/heating system.