

UFH Polymer Manifolds

Data Sheet

PRODUCT INFORMATION

ISSUE 1 – FEBRUARY 2021

Product Code: UFHMANP (1|2|3|4|5|6|7|8|9|10|11|12)

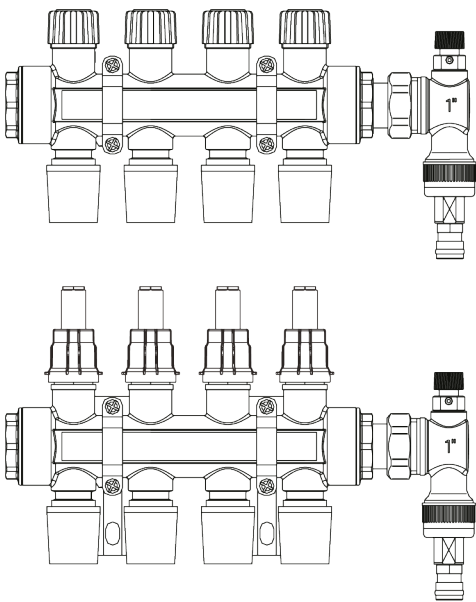
The Polypipe UFHMAN polymer manifolds are a lightweight cost effective alternative to our Autobalancing manifolds.

The UFHMAN manifolds come complete with a drain and air vent assembly, which can be positioned on either end of the manifold.

Isolation valves are supplied as an optional extra for the supply end of each manifold. The bottom manifold is the flow and the top manifold is the return.

Each manifold port comes complete with a PolyMax push-fit connection. The flow meter on each flow port of the manifold provides a visual indication of the flow through each circuit.

Manual balancing can be undertaken by using the blue cap on the return manifold for manual adjustment, or removing the blue cap completely.



Product Code	No. Ports	L
UFHMANP2	2	138
UFHMANP3	3	188
UFHMANP4	4	238
UFHMANP5	5	288
UFHMANP6	6	338
UFHMANP7	7	388
UFHMANP8	8	438
UFHMANP9	9	488
UFHMANP10	10	538
UFHMANP11	11	623
UFHMANP12	12	673

Find out more at:
Polypipeufh.com

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Plumbing Supplies

 **Polypipe**
Underfloor Heating

UFH Polymer Manifolds

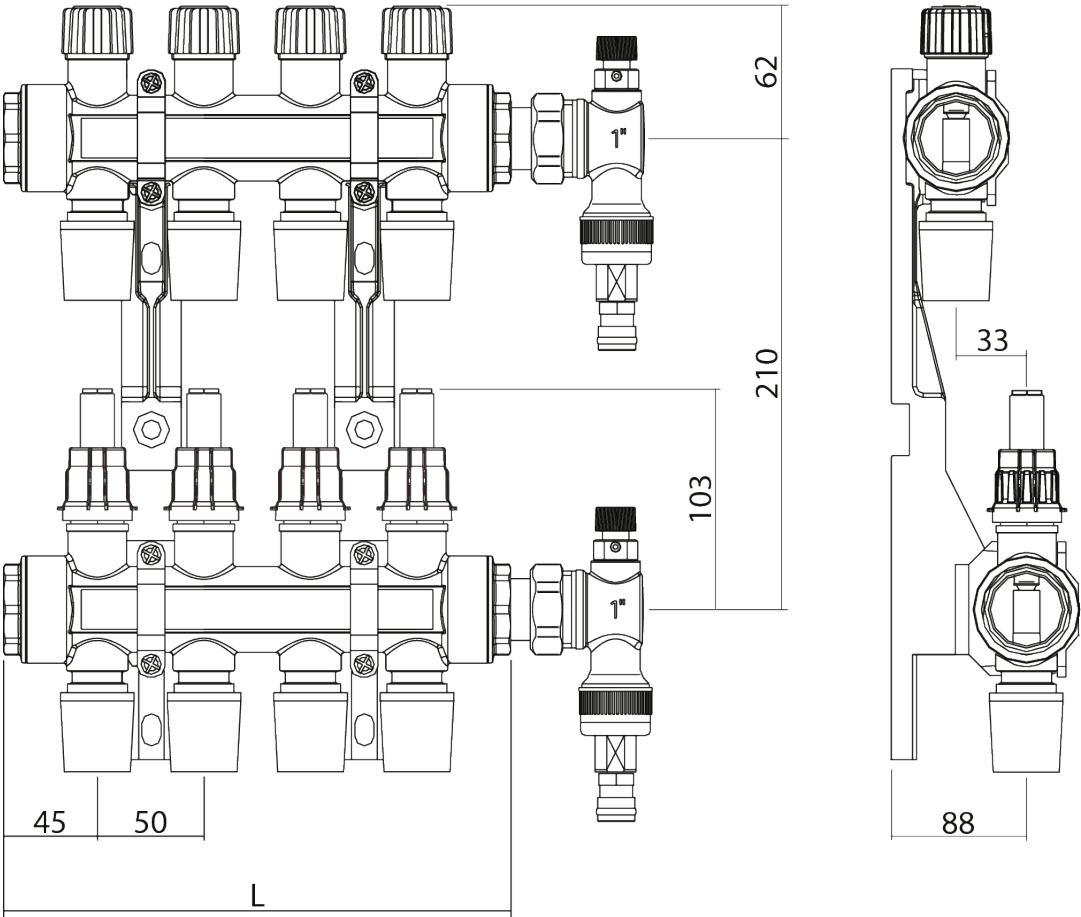
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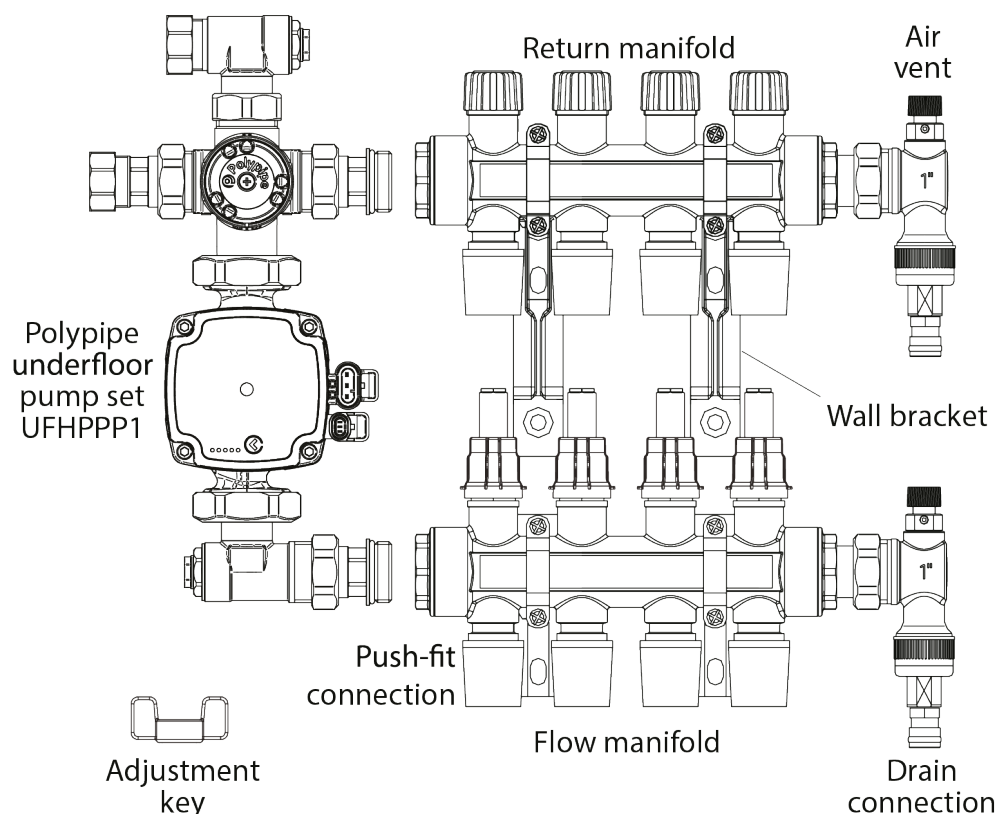
Dimensions

Please Note: All dimensions are measured in millimetres (mm)



Manifold Assembly with Heating Pack

Typical Polypipe assembly of manifolds with underfloor heating pack.



Installation

Remove the manifold from the box and arrange the flow and return manifolds to ensure that the inlets/outlets are pointing downwards.

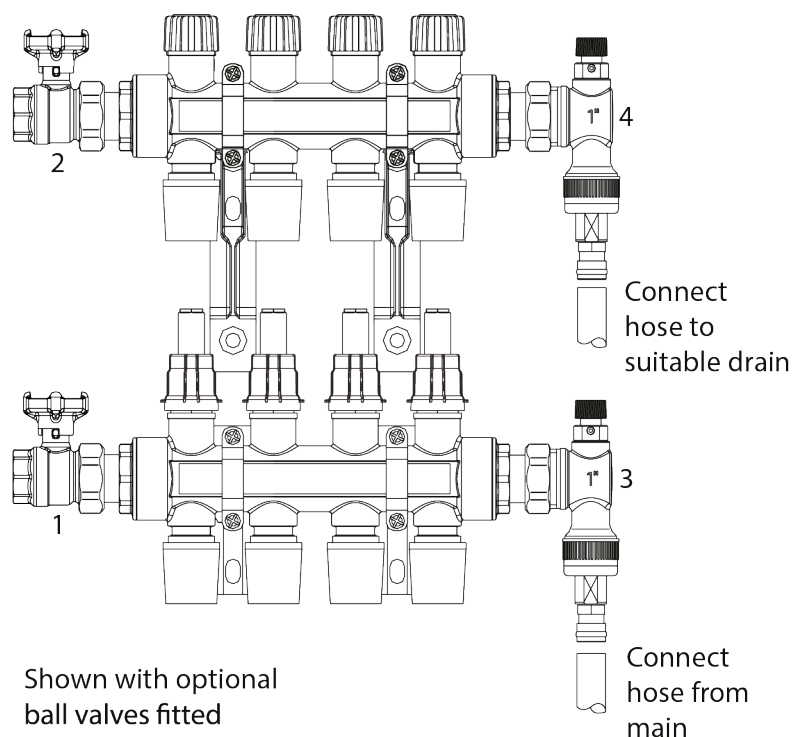
The air vent and drain valve are factory assembled to the manifolds. Ensure the seal is correctly in place before tightening the compression nut, initially by hand and then using a suitable sized spanner fully tightened on to the manifold.

To ensure the valves are securely connected to the manifold, use a 38mm spanner or wrench to tighten by a further half turn. If supplied as an optional extra remove the isolating valves from the packaging and connect to the opposite end of the manifold.

As with the air vent and drain valve, ensure the seal is correctly in place before tightening the compression nut by hand on to the manifold. Then, complete the connection by using a 38mm spanner or wrench to tighten by a further half turn.

Fix the manifold vertically in the desired position utilising both screw holes on each bracket with the screws and washers provided.

The manifold is now in position and ready to be connected to the mains from the boiler and the underfloor heating pipe circuits.



Filling the System

Close the manifold isolating valves (1) & (2).

Connect a hose to the manifold return drain off point (4) and take to a suitable waste point.

Connect a second hose to the manifold filling point (3) and attach to a mains cold water supply with a maximum operating pressure of 3 bar.

The connections to the manifold drain and fill points are push on or have an internal thread if required.

Close all underfloor heating circuits by screwing down the blue caps.

Open all flow meters to the full open position.

Flush the first circuit with mains cold water until all of the air has been purged. Once this has been done close the first circuit and repeat the process for all of the other circuits on the manifold.

Once the system has been filled and purged of air, and

before any screed is laid, a system pressure test must be carried out to confirm the integrity of the installation. It is recommended that this test be done using a suitable hydraulic pressure test kit and not with air.

NOTE: The system pressure test should be carried out with the manifold pump set removed.

With the manifold isolating valves closed remove the hose connected to the water main and connect the pressure test pump to the manifold flow rail using the push on connection on the filling/drain-off point (3).

Pressurise the system to 6 bar max and leave under pressure for 1 hour.

Once the pressure test is complete reduce the system pressure down to 3 bar to protect the pipework whilst any screeding process is carried out.

IMPORTANT NOTE: Do not leave the system under pressure during periods of extreme cold weather or when there is a risk of freezing.

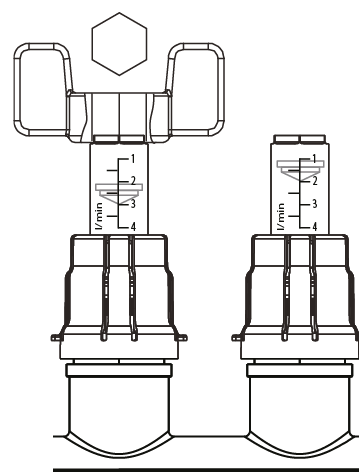
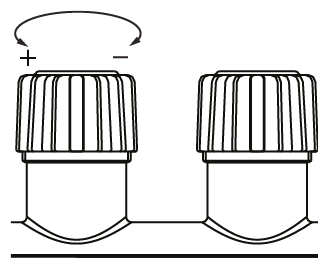
System Balancing

Once the system is up and running it will be necessary to balance the system in accordance with the design data provided. This should be done using the following method:

The systems and manifolds are normally balance cold. Ensure that the main system duty pump is operating correctly and that sufficient flow rates are being provided at the manifold(s).

Set the underfloor heating controls to call for heat and check to see that the two-port zone valve and manifold pump are energised.

1. Ensure that the isolating valves on the return are fully open.
2. By turning the cap anti-clockwise the valve will open more until fully open
3. The flow rate to each individual circuit can be set between 1 to 4 l/min using the plastic key provided.
4. Place the adjusting key on the hexagon on the top of the flow meter as shown.
5. Using the scale and floating indicator turn the adjusting key until the specified flow rate is achieved.
6. Repeat the procedure on all the flow meters to balance the manifold circuits.
7. The automatic flow control technology will then constantly adjust each circuit to the set flow rate.
8. Once all of the circuit flow rates have been adjusted the system should be left to operate for a short period whilst any remaining air is removed.
9. Once this has been done the flow rates should be re-checked and adjusted if necessary.



UPM3 Pump Specification

UPM3 Features	UPM3 Specification
CE Mark Conformity With the following relevant EC Directives	Ecodesign Directive (2009/125/EC). Circulations with and without pump housing: Commission regulation No 641/2009 Standards used: EN 16297-1:2012, EN 16297-2:2012, EN 16297-3:2012 rective (2004/108/EC) Standards used: EN 61000-6-2:2005, EN 61000-6-3:2007, EN 55014-1:2006 / A1:2009, EN 55014-2:1997/A1:2001/A2:2008
	Low voltage Directive (2006/125/EC) Standards used: EN 60335-1:2012/AC:2014, EN 60335-2-51:2003/A1:2008/A2:1012
	Ecodesign Directive (2009/125/EC). Circulations with and without pump housing: Commission regulation No 641/2009 Standards used: EN 16297-1:2012, EN 16297-2:2012, EN 16297-3:2012
Ecodesign ERP Ready 2015	Fulfilling ecodesign requirements in 2015: EEI ≤ 0.20 EN16297/3 or EN16297/2
REACH Compliance	REACH Directive 1907/2006
WEEE Compliance	WEEE Directive 2012/19/EU Circulators are not seen as being in scope
ROHS Compliance	RoHS Directive 2011/65/EU
VDE Approval	VDE certificate: No 40039416. It proves the conformity with the essential safety requirements of the EC Low Voltage Directive (2006/95/EC) including amendments
VDE Code	GFNJB (hybrid variants) or GFNJC (UPM3)
Enclosure Class	IP 44 (standard without drain holes), Option: IP X4D (with drain holes)
TF Class	TF 110 at 70°C ambient temperature
High Voltage Protection	1000 VAC (EN 60355-1)
Drinking Water Approvals WRAS, KTW, DVGW W270 etc.	All pump head components will be compliant Specific compliant housings will be available
Deblocking Software	Continuously restarting after 1.33 sec with max torque
Deblocking Device	Manual deblocking device, access from front side
Dry Run Ability - First Start	1 min (3 x 20 sec), all pumps will be lubricated with glycerine
Dry Run Ability - During Operation	Rotor can filled with water: fulfils EN 60335-2-51
Expected Lifetime:	>100.000 h (with specified load profile)
Expected Lifetime:	>500.000 on/off cycles
Min. Switching Time Power ON/OFF	With NTC: 1min, with Relay: no specific requirements
Flow Estimation	Available depending on the housing, accuracy: see PWM specification
NRUSH Current	With relay: <4 A, with NTC: <10 A

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UPM3 Features	UPM3 Specification
Equipment Class	I (EN 60335-1)
Insulation Class	F (EN 60335-1)
Maximum Leakage Current	≤ 3.5 mA (EN 60335-1)
Speed Range	563 to 5991 min-1 (depending on the variant)
Maximum Ambient Temperature	70°C
Maximum Media Temperature	95°C on composite housings, 110°C on cast iron housings
Maximum System Pressure	1 MPa (10 bar) (depending on the housing material)
Minimum Inlet Pressure	0.05 MPa (0.5 bar) at 95°C liquid temperature
Minimum Media Temperature	0°C (for IP44: above dew point of ambient air)
Minimum Supply Voltage	160 VAC (with reduced performance)
Motor Protection	The motor is protected by the electronics in the control box and requires no external motor protection
Peak Temperature	Tm= 130°C (for peak ≤ 30 min)
Nominal Supply Voltage	EU: 1 x 230V + 10%/ -15%, 50 Hz
Reaction Time (Till Motor at 90% RPM)	< 1.5 sec for cold start, warm start and speed change
Reaction Time (Till Return Signal Valid)	< 3.3 sec for cold start, warm start and speed change
Relative Air Humidity	Maximum 95%, non-condensing environment
Storage Temperature	- 40°C to + 75°C+A1

UPM3 Performance Range

