MrPEX®
SYSTEMS

Instruction Manual

For

MrPEX Composite Radiant Manifold

For Radiant Floor Heating and Cooling Applications

- ☞ Read manual before use!
- ☞ Observe all safety information!
- ☞ Keep manual for future use!

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Literature part# L404

Contents

1 About this instruction manual

This instruction manual is part of the product.

- ▶ Read this manual before using the product.
- ▶ Keep this manual during the entire service life of the product and always have it readily available for reference.
- ▶ Always hand this manual over to future owners or users of the product.

2 Safety

2.1 Intended use

This Composite Manifold may only be used in radiant heating and cooling systems with a maximum concentration of 50% propylene glycol in the water.

Any use other than the use explicitly stated in this instruction manual is not permitted.

2.2 Prohibited application

This Composite Manifold must never be used for the distribution of drinking (potable) water.

2.3 Safe handling

This product is manufactured in accordance with all applicable safety regulations. Each unit is subjected to a function and safety test at the factory prior to shipment.

- ▶ Operate the product only when it is in good condition. Always follow instructions in this manual, all pertinent local and national codes and guidelines, as well as health and safety regulations.

2.4 Qualification of personnel

The product may only be installed, commissioned, operated, maintained, shut down and disposed of by qualified personnel.

2.5 Modifications to the product

Changes or modifications to the product may lead to malfunction and are prohibited for safety reasons.

2.6 Use of spare parts and accessories

Use of unsuitable spare parts and accessories may cause damage to the product.

- ▶ Use only the manufacturer’s genuine spare parts and accessories.

3 Product description

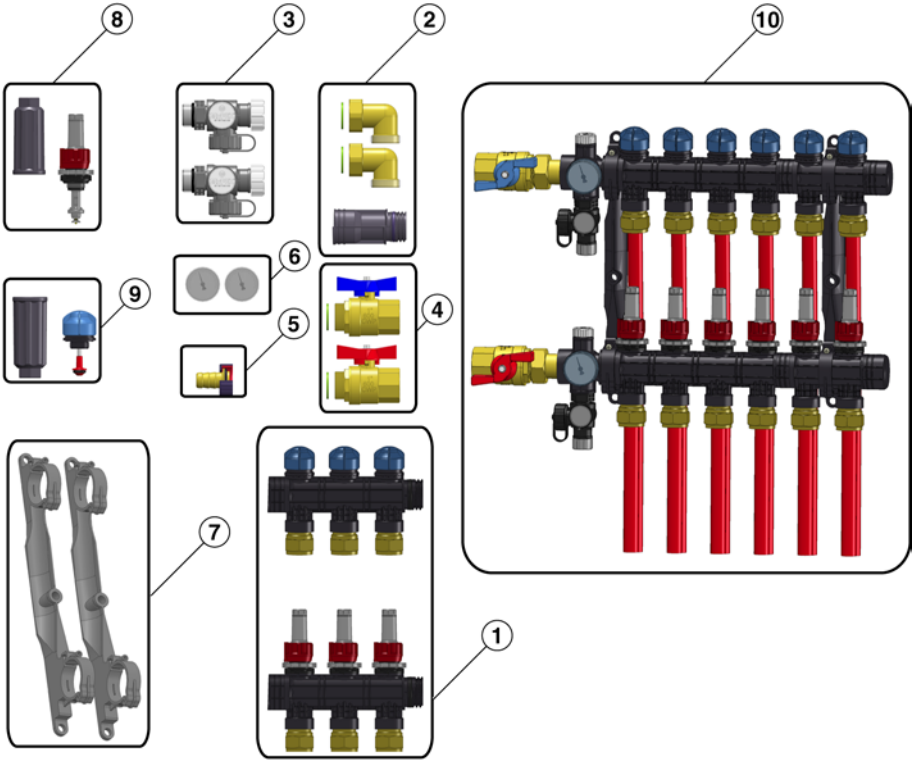


Fig. 1: Composite Manifold

#	Part#	Description	Type	Unit
1	3810001	Composite Manifold Sections, Valve & Flow-meter	1 Loop	Each
	3810002	Composite Manifold Sections, Valve & Flow-meter	2 Loop	Each
	3810003	Composite Manifold Sections, Valve & Flow-meter	3 Loop	Each
2	3810007	Composite Manifold Body Extension Set	-	Set of 2
3	3810010	Drain Valve for #3810009, spare part	-	Set of 2
4	3810014	Composite Manifold Isolation ball-valves, spare part	-	Set of 2

5	3810015	Hose connector for drain valve, spare part	-	Each
6	3810016	Composite Manifold Thermometer, spare part	-	Set of 2
7	3810171	Composite Manifold Bracket, spare part	-	Set of 2
8	3810172	Composite Manifold Supply flowmeter valve, spare part	-	Each
9	3810174	Composite Manifold Return valve, spare part	-	Each
10	3810200	Composite Manifold, Valve & Flowmeter, Complete Kit	2 Loop	Each
	3810300	Composite Manifold, Valve & Flowmeter, Complete Kit	3 Loop	Each
	3810400	Composite Manifold, Valve & Flowmeter, Complete Kit	4 Loop	Each
	3810500	Composite Manifold, Valve & Flowmeter, Complete Kit	5 Loop	Each
	3810600	Composite Manifold, Valve & Flowmeter, Complete Kit	6 Loop	Each
	3810700	Composite Manifold, Valve & Flowmeter, Complete Kit	7 Loop	Each
	3810800	Composite Manifold, Valve & Flowmeter, Complete Kit	8 Loop	Each
	3810900	Composite Manifold, Valve & Flowmeter, Complete Kit	9 Loop	Each
	3811000	Composite Manifold, Valve & Flowmeter, Complete Kit	10 Loop	Each
	3811100	Composite Manifold, Valve & Flowmeter, Complete Kit	11 Loop	Each
	3811200	Composite Manifold, Valve & Flowmeter, Complete Kit	12 Loop	Each

4 Specifications

Table 1: Specifications

Parameter	Value
Oxygen tightness	Accordant to DIN 4726 regarding plastic pipes [≤ 0,10 g/(m³ x d)], [≤ 0,10 x 10^{-3} oz/(cft x d)]
Main connection	1” NPT
Heating circuit connection	EK 20 (G3/4 Eurokonus)
Operating temperature and pressure	Max. 140 °F at 87 psi or 60 °C at 6 bar Max. 158 °F at 72 psi or 70 °C at 5 bar Max. 176 °F at 58 psi or 80 °C at 4 bar Max. 194 °F at 44 psi or 90 °C at 3 bar
Manifold flow	15.4 gpm
Branch Cv-value	1.35 gpm
Available sizes	2-12 Heating circuits

Heating circuits	2	3	4	5	6
Distance A	3.125	5.125	5.125	5.125	5.125
Distance B	4.000	4.000	4.000	6.000	6.000
Distance C	3.000	3.000	5.000	5.000	5.000
Distance D	1.000	1.000	2.875	2.875	2.875

Heating circuits	7	8	9	10	11	12
Distance A	7.125	7.125	7.125	9.000	9.000	9.000
Distance B	7.875	7.875	9.875	9.875	11.875	11.875
Distance C	5.000	7.000	7.000	7.000	7.000	9.000
Distance D	2.875	4.875	4.875	4.875	4.875	6.875

Note: Dimensions shown on this page are rounded to closest 1/8”.

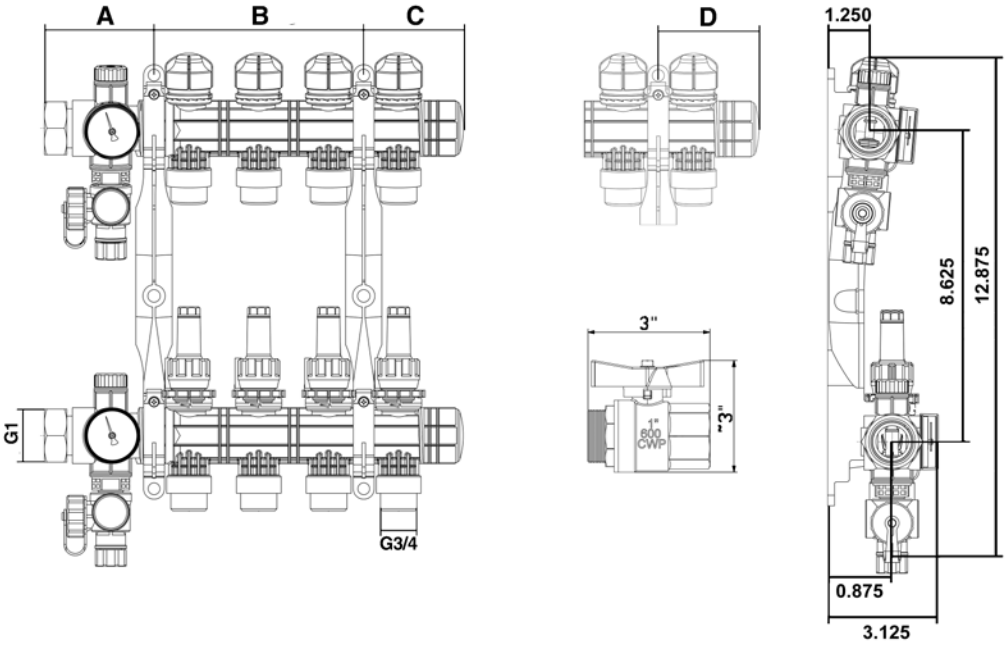
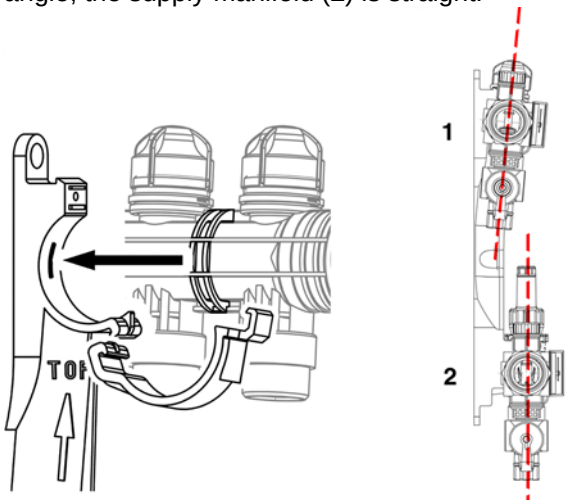


Fig. 2: Manifold dimensions

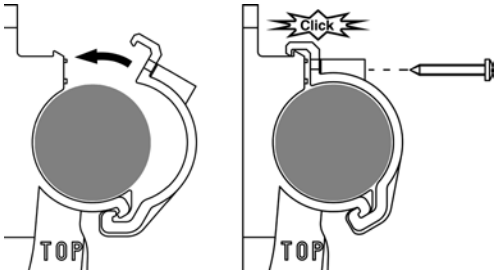
5 Installation and commissioning

Composite Manifold can be installed in a cabinet or mounted directly to the wall. Manifold can be mounted upside down, however, this will slightly impact the readout of the flowmeters.

1. Snap in manifold. The Return manifold (**1**) is arranged at a slight angle, the supply manifold (**2**) is straight.



2. Snap bracket to the top and fix it with a screw.



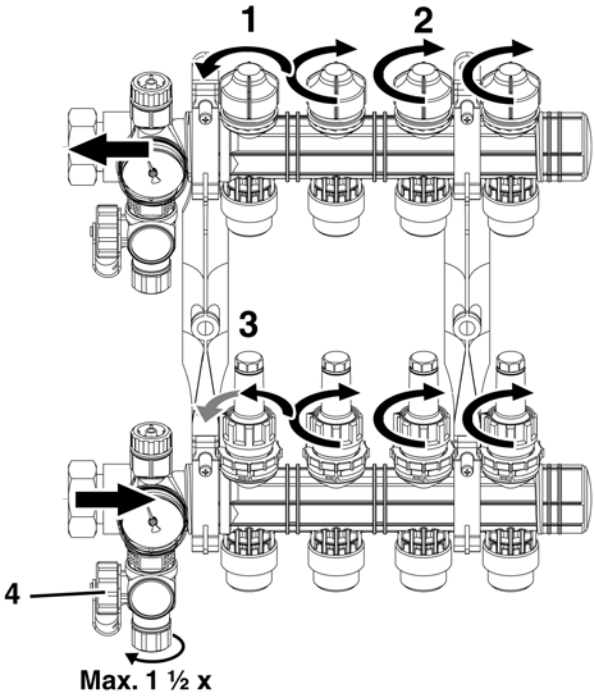
5.1 Pressure test procedure

1. Once all loops are connected to the manifold, it is time to pressure test the system.
2. Connect a pressure test kit (3700183) with a 0-100 psi gauge and an air valve to one of the manifold ball valves. Close the other ball valve.
3. Pressure test any portion of the system that will be embedded in the floors, walls, or ceiling of the building to 40-60 psi, or as in-

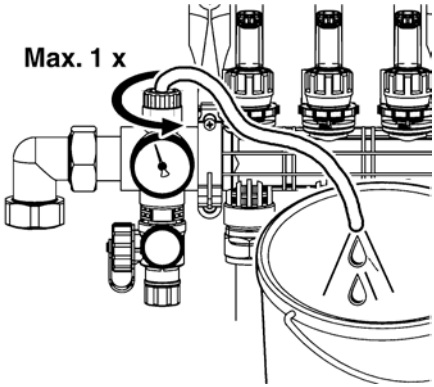
dicated by local codes, whichever is greater for at least 1 hour, or for a sufficient period to determine if any leaks exist in the system. Reduce pressure to 30 psi prior to embedding the tubing. A 30-40 psi pressure test should remain during phases of construction to monitor system integrity.

5.2 System filling, purging and venting

1. Close all supply and return loop valves and main ball-valves.
2. Connect the supply hose to the drain valve (**4**) on the supply side. Connect another hose to the drain valve on the return side, placing the end in a large bucket or container.
3. Open the white hand wheel on the supply drain valve.
4. Open Return valve of the first loop (**1**).
5. Open supply flowmeter valve of the first loop (**3**) very slightly (minimum possible). Leave all other valves closed (**2**).
6. Fill and purge system with max. 70 psi. As soon as water starts flowing into the loop, open the supply flowmeter valve (**3**) fully. Let water flush through the first loop into the bucket until no air bubbles are present.

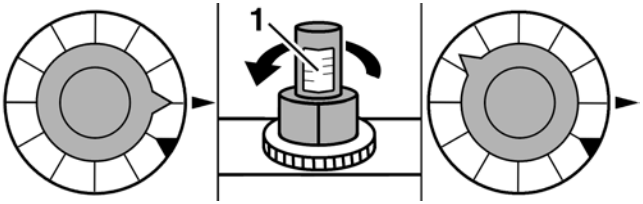


7. Close supply Flowmeter valve and return valve of the first loop isolating it.
8. Open second loop and repeat for all remaining loops.
9. Vent system wih the manual air vent.

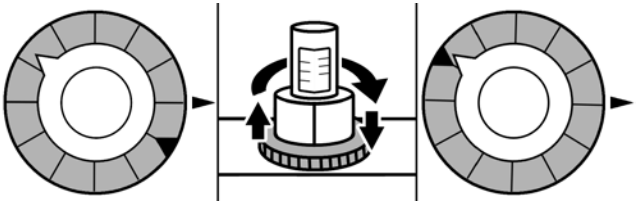


5.3 Adjusting the Supply Flowmeter valves

1. Open Flowmeter valve until you reach the calculated water volume (**1**) is shown on the flow meter.



2. Setting the memory stop.



6 Warranty

The manufacturer's warranty for this product is 24 months from date of purchase.

7 Customer satisfaction

Customer satisfaction is our prime objective. Please get in touch with us if you have any questions, suggestions or problems regarding this product.

8 Addresses

Please contact us at:

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9 Notes