

Data Sheet

FH-ME Floor Heating Manifold

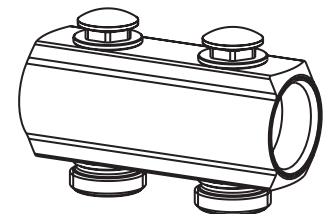
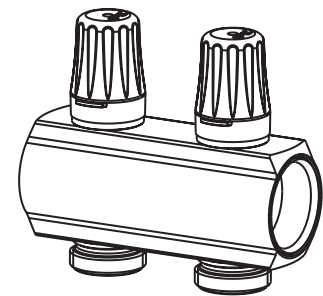
Application

The FH-ME Manifold is used for controlling water flow in under floor heating systems. Each tube of the floor heating system is connected to the manifold, thus making it possible to control water flow or heat supply to each room in the building individually.

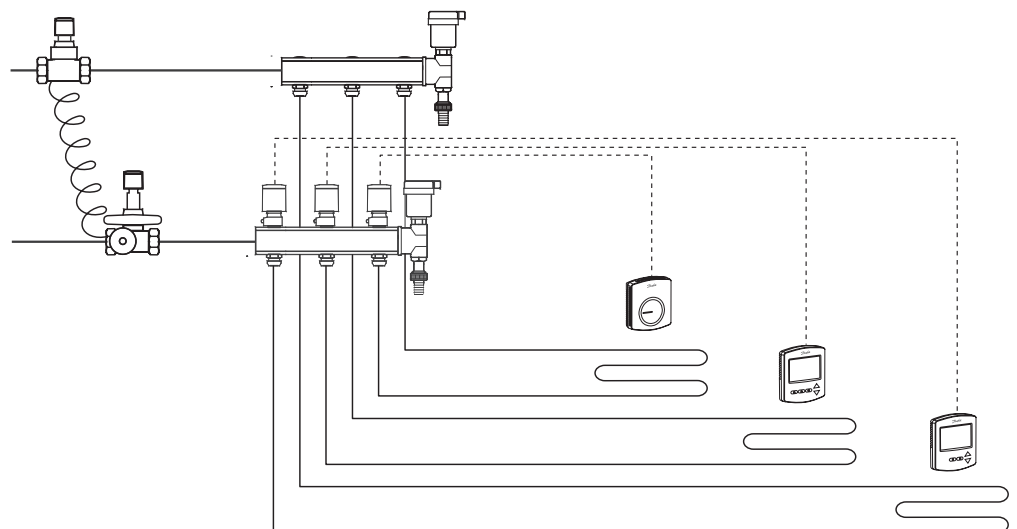
The manifold consists of a supply and return manifold. The supply manifold includes possibility for individual shut-off of each circuit and as a flow adjustment. The return manifold is equipped with integrated Danfoss RA connection. The valves can be controlled electronically by thermal actuators or act as self-acting units by means of remote temperature adjusters.

The manifold is supplied in modules of 2 to 8 outlets. In addition extension pieces are available for connecting the manifolds in series. Ball valves are available as an option for positive shut-off between manifold and system.

The end pieces FHF-EM and FHF-EA are supplied with manual airvent or alternatively with automatic airvent, purge and valve. The end pieces are placed at the end of the manifold.

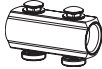






*FH-ME supply**FH-ME return*

System Layout







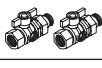






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Ordering

Description	Type	Code no.
 Manifold set 2+2	FH-ME2	088U0612
 Manifold set 3+3	FH-ME3	088U0613
 Manifold set 4+4	FH-ME4	088U0614
 Manifold set 5+5	FH-ME5	088U0615
 Manifold set 6+6	FH-ME6	088U0616
 Manifold set 7+7	FH-ME7	088U0617
 Manifold set 8+8	FH-ME8	088U0618

Accessories

Description	Type	Code no.
 End section - automatic airvent and purge valve	FHF-EA	088U0580
 End section - manual airvent and purge valve	FHF-EM	088U0581
 End caps - set	FHF-E	088U0582
 Connection pieces - set	FHF-C	088U0583
 Reduction bushes/pieces -set 1" - 3/4"	FHF-R	088U0584
 Mounting brackets - set	FHF-MB	088U0585
 2 x ball valve 1" with tail piece - for connection to manifold and for blocking of floor heating system	FHF-BV	088U0586
 1 x thermometer 0-60°C Ø35mm - for flow/return temperature measurement	FHF-T	088U0029
 Thermal actuator, 24 V, NC, Danfoss RA connection to valve	TWA-A	088H3110
 Thermal actuator, 230 V, NC, Danfoss RA connection to valve	TWA-A	088H3112
 Thermal actuator, 24 V, NC, with end switch, Danfoss RA connection to valve	TWA-A	088H3114

Compression Fittings

Description	Type	Code no.
 Compression fittings for PEX tubing in accordance with ISO 15875. <ul style="list-style-type: none"> • Max working pressure: 6 bar • Test pressure: 10 bar • Max. flow temperature: 95 °C • G 3/4" internal thread 	16x2 mm	013G4156
	20x2 mm	013G4160
	20x2.25 mm	013G4093
	20x2.5 mm	013G4161
 Compression fittings for ALUPEX tubing. <ul style="list-style-type: none"> • Max working pressure: 6 bar • Test pressure: 10 bar • Max. flow temperature: 95 °C • G 3/4" internal thread 	16x2 mm	013G4186
	20x2 mm	013G4190
	20x2.25 mm	013G4093
	20x2.5 mm	013G4191
 Compression fittings for STEEL and COPPER tubing <ul style="list-style-type: none"> • Max working pressure: 6 bar • Test pressure: 10 bar • Max. flow temperature: 95 °C • G 3/4" internal thread 	16 mm	013G4126
	18 mm	013G4128

Note: Max flow temperature given by the tube manufacturer must not be exceeded.

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Commissioning

The pre-setting of the manifold valves determines the flow in the floor heating tubes and is therefore an important factor for obtaining optimal hydraulic balance in the system.

A correct hydraulic balance is important if optimal comfort shall be achieved with a minimum of energy consumption and is easily carried out following the example shown below.

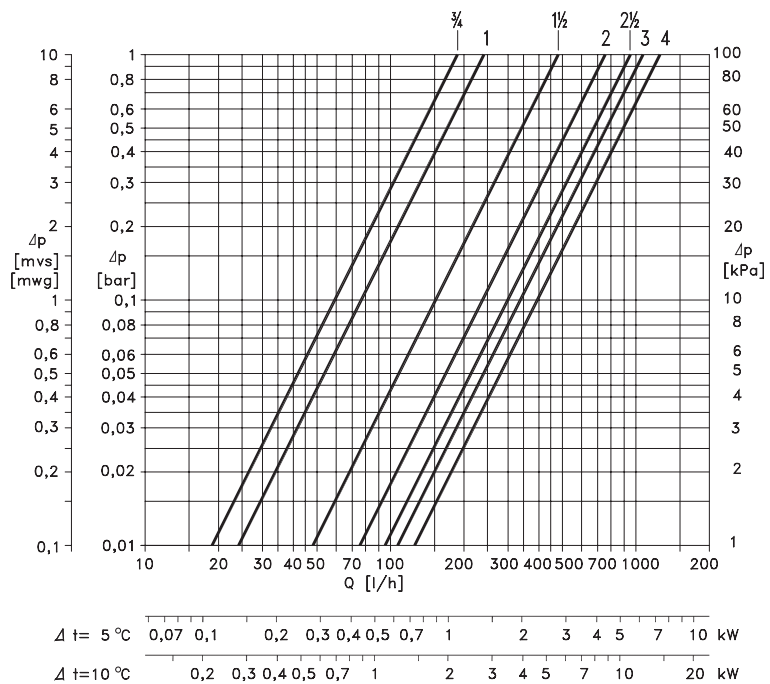
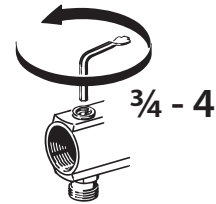
Example

Room 1:	1. Determine longest tube/largest room	25 m ²
	2. Desired cooling (ΔT)	5° C (typical)
	3. Determine heat requirement for the room	50 W/m ²
	4. Conversion factor	1.16
	5. Calculation of flow for the room	$Q \text{ (l/h)} = \frac{50 \text{ W/m}^2 \times 25 \text{ m}^2}{10^\circ \text{ C} \times 1.16} = 108 \text{ l/h}$
Room 2:	6. Determine area for the next room	15 m ²
	7. Calculation of flow for the room (ΔT and heat requirement is assumed identical for the rooms in this case)	$Q \text{ (l/h)} = \frac{50 \text{ W/m}^2 \times 15 \text{ m}^2}{10^\circ \text{ C} \times 1.16} = 65 \text{ l/h}$

Capacity

The diagram shows the capacities of each heating circuit for different settings of the flow manifold.

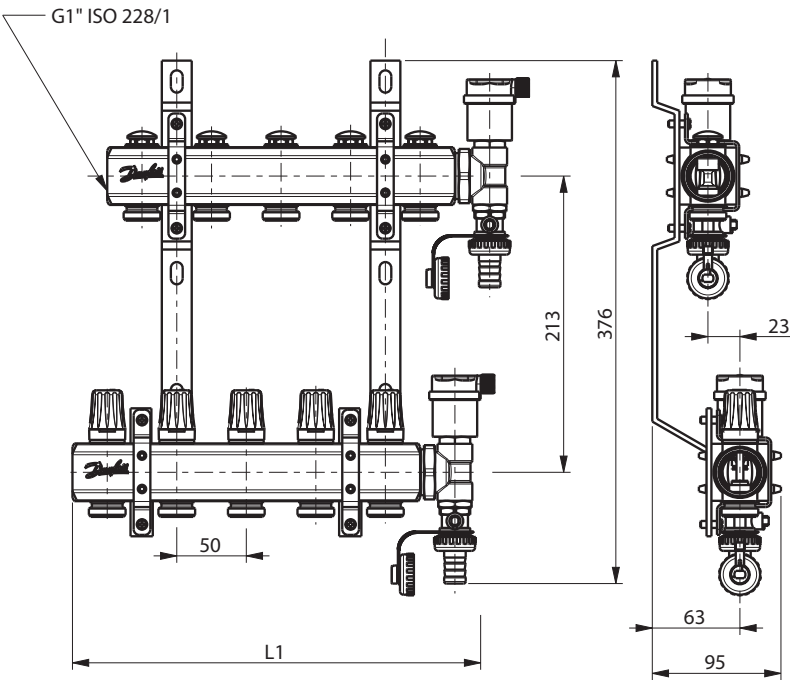
The figures 3/4 to 4 above the diagram indicate how many turns of the key are required to obtain the correct water volume (count from closed position onwards).



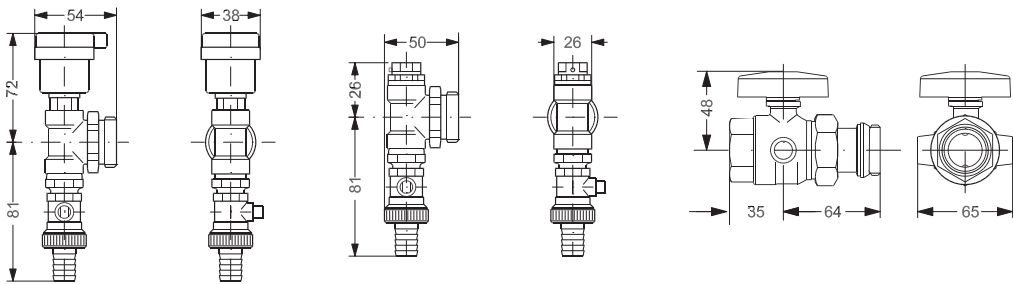
Operation Conditions

Max. differential pressure..... 0.6 bar
 Max. working pressure 10 bar
 Max. test pressure 16 bar
 Max. flow temperature 90° C

Dimensions



Type	2+2	3+3	4+4	5+5	6+6	7+7	8+8
L1 (mm)	143	193	243	293	343	393	443



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