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Stainless Steel UFH Manifold datasheet

Ambiente 413 Series Stainless Steel Manifolds

Engineered excellence for hydronic underfloor heating

Manifold Sizing Chart

Number of ports	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Manifold length (mm)	142	192	242	292	342	392	442	492	542	592	642	692	750	805

Please Note: Recommended minimum installation clearances: 200mm between the finished floor level (FFL) and bottom of the manifold, 100mm above the manifold. 50mm to either side of the manifold and allow an extra 100mm for the supply pipe work.

Product Overview

Ambiente stainless steel manifolds are designed for use with hydronic underfloor heating systems. They can either be used in conjunction with a pump/blender unit, or coupled directly to the centrally blended/pumped heatsource.

The manifold is manufactured from pressed stainless steel, and is run through stringent testing procedures throughout the manufacturing process. Following completion, every manifold is tested to 6 bar pressure (typical operating pressure would be less than 3 bar).

As standard the manifold comes with a manual air vent, which can easily be upgraded to an automatic version. A fill/drain point with hose connector is located on both the flow and return bar.

Each loop on the flow bar has a flow meter, to clearly indicate the flow rate achieved in each loop - these meters are used to balance the system at commissioning stage, as per the UFH design.

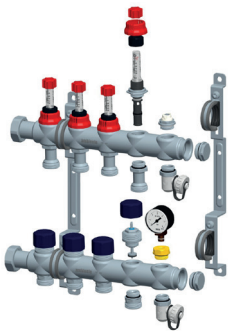
Each loop on the return bar has a valve to open/close the loop - this is normally controlled by an actuator valve, which responds to the call for heat from a room thermostat.

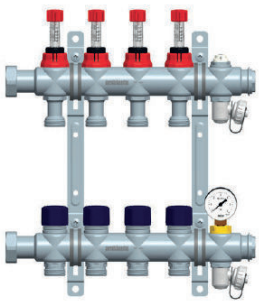
The manifold connections are 3/4" BSP and Ambiente supply connections for its 12mm, 16mm and 17mm UFH pipework. Also available are connections for 15mm copper, allowing connection of towel rads.

Following assembly, manifolds are factory pressure tested to 6 bar. The manifold can also connect to LST radiators or towel rails.

Pumpset Connection Sizes

Flow = 3/4" female BSP, return = 3/4" female BSP





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Application

Ambiente stainless steel manifolds are suitable for the usage in hot water heating systems according to EN 12828 as well as in surface heating and cooling systems according to EN 1264. They are used for the distribution of water in the connected heating and cooling circuits as well as for the shut-off and regulation of the individual volume flows. The manifold fulfills the requirements of DIN EN 1264-4, according to which the shut-off and adjustment functions must be independent of each other.

Non-corrosive heating water according to VDI 2035 or ÖNORM H 5195 or a glycol-water mixture up to 50% glycol can be used as operating medium. The manifold can be used at media temperatures between -10 and +70 °C can be used at operating pressures up to 4 bar or at max. 50 °C up to max. 10 bar continuous operating pressure.

Delivery

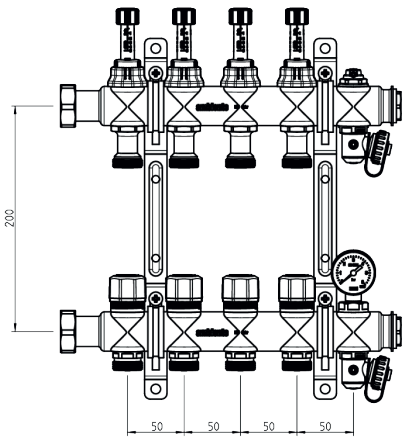
Pre-assembled components:

- 2 stainless steel manifold bars (Ø 35 x 1.5 mm), profile barrel-shaped (material X5CrNi18-10 (material number 1.4301) acc. to DIN EN 10088); with engraved customer logo and date of production.
- Primary side with union nut G1 flat sealing, brass nickel-plated
- Distance between heating circuits 50 mm, completely pre-assembled.
- **Outflow:** Manifold bar with flow meters Regolux® Memory 0-5 l/min with red hand wheels, acc. to DIN EN 1264-4, and with connection nipples G¾ male thread, inner cone acc. to DIN EN 16313, brass nickel-plated.
- **Return:** Manifold bar with thermostatic valves M30 x 1,5, stainless steel 1.4301, with blue protection caps and connection nipples G¾ male thread, inner cone acc. to DIN EN 16313, brass nickel-plated.
- 2 x filling/draining valve G ½ , brass nickel-plated.
- 2 Manual vent plugs ½"

Enclosed in the carton package:

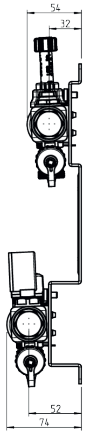
- 2 x mounting brackets with sound insulation.
- Small foil bag with 4 x screws, 4 x dowels.
- 2 flat gaskets 1"

Manifold front view (Four port manifold shown for example purposes only)



Note: It is recommended that a 2 port motorised zone valve be installed on the primary flow before each manifold to prevent excess water pressure.

Manifold side view



• Continuous operating conditions:	-10 °C to +70 °C at max. 4 bar (DIN EN 1264-4)
• Max. Test pressure at 20 °C:	6 bar (DIN EN 1264-4)
• Application class:	4 (ISO 10508)
• Special operating conditions:	+50 °C at max. 10 bar (max. test pressure at 20 °C = 12.5 bar)
• Operating media:	Non-corrosive heating water according to VDI 2035 or ÖNORM H 5195 or glycol-water mixture up to 50% glycol
• Material:	Stainless steel 1.4301 (DIN EN 10088)

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Thermostatic Valve

- Kvs: 2,75 m^3/h
- Connection thread: M30 x 1,5
- Closing dimension: 11.8 mm
- Closing force: 90 N (minimum force of the actuator)
- Material: Stainless steel 1.4301, EPDM