

**ambiente<sup>®</sup>**

more than underfloor

# Installation Guide

**AmbiPlate 20 | 30**

Customer:

Project:

Project Reference:

Date:



# AMBIPLATE INSTALLATION GUIDE

## AMBIPLATE SERIES

- + Designed for joisted/battened floors
- + Maximum heat transfer
- + Even heat diffusion – highly conductive
- + No impact on floor buildup
- + Quick response time

AmbiPlate systems are suitable for joisted and most timber floors with either joists or battens. The pre-grooved plates are fixed to either battens or joists and the UFH pipe is run through the grooves and mineral wool insulation is placed underneath the plates to ensure that the heat is deflected upwards to the floor.

Almost any type of floor covering can be used with AmbiPlate, see 'floor coverings' section of this guide for more details.

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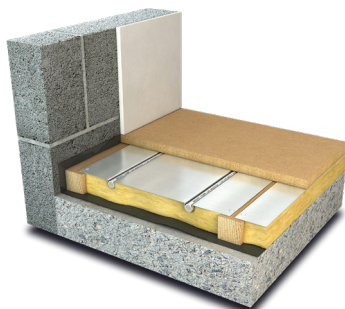
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This installation guide is suitable for the following AmbiPlate systems.

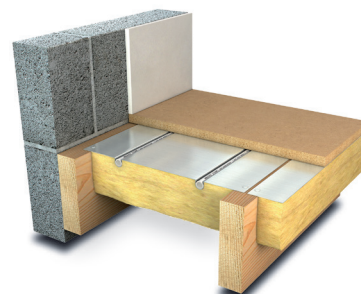
Data sheets can be downloaded directly from our website.

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### AMBIPLATE 20 (BATTENED)



### AMBIPLATE 30 (JOISTED)



## TECHNICAL DATA

### Technical

- + Pipe 17mm x 2mm PE-RT pipe
- + Plate 1000mm x 390mm x 0.5mm Diffuser Plate

### Heat Output Table - AmbiPlate systems

Floor Finish	Flow and Return Water Temperatures °C		
	50/40	45/35	40/30
Ceramic Tile (0.10m <sup>2</sup> K/W)	70 w/m <sup>2</sup>	53 w/m <sup>2</sup>	42 w/m <sup>2</sup>
Wood (0.15m <sup>2</sup> K/W)	70 w/m <sup>2</sup>	53 w/m <sup>2</sup>	42 w/m <sup>2</sup>
Carpet and Underlay (0.20m <sup>2</sup> K/W)	62 w/m <sup>2</sup>	44 w/m <sup>2</sup>	35 w/m <sup>2</sup>
18mm chipboard has been used as a sub floor layer in formulating the heat emissions shown above.			

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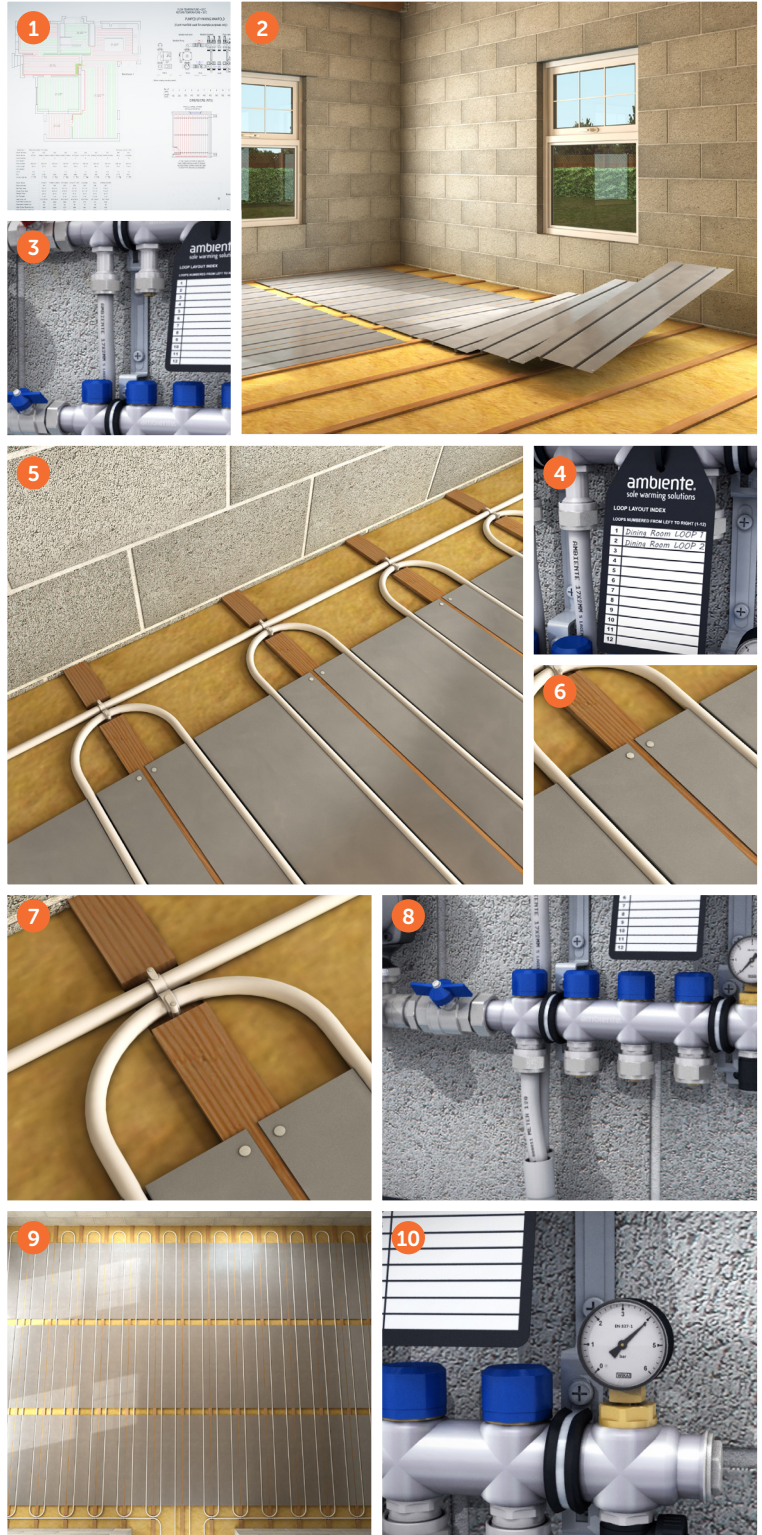


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# INSTALLATION METHOD

- 1 Refer to the design plan drawings and prepare to lay the floor in accordance with the layout described.
- 2 Lay the insulation between battens/joists followed by the grooved diffuser plate. Check the system plans for the number and length of each loop required. Note: Ambiente pipe is marked every metre to help you calculate loop lengths.
- 3 Starting on the left side of the manifold, connect to the manifold flow bar.
- 4 Make a note of which zone the loop serves on the manifold tag supplied.
- 5 Lay the pipe out, navigating the most efficient route between the manifold and the zone. Pipes will need to be notched into the batten/joist when they loop from one joist void to another.
- 6 Secure aluminium diffuser plate to the batten/joist. Lay pipe into the pre-grooved aluminium diffuser plates, as per the system designs.
- 7 Use pipe clips to secure the tail pipework as it crosses the batten/joist.
- 8 On completion of the loop, follow the same route back to the manifold and connect to the return bar (bottom bar with blue caps), making a clear note of the actual loop length installed on the manifold tag.
- 9 Follow the same procedure for all loops until the area is evenly covered with pipe, following your pipe layout design.
- 10 Once all loops are installed and connected to the manifold, pressure test the system.
- 11 Lay final floor finish after the system has been successfully pressure tested.

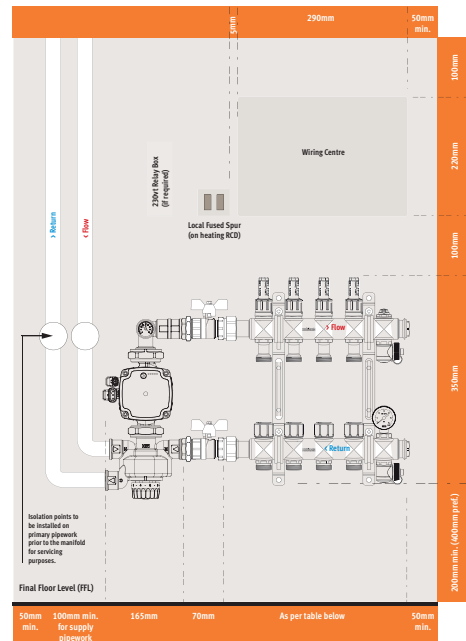


# MANIFOLD POSITIONING

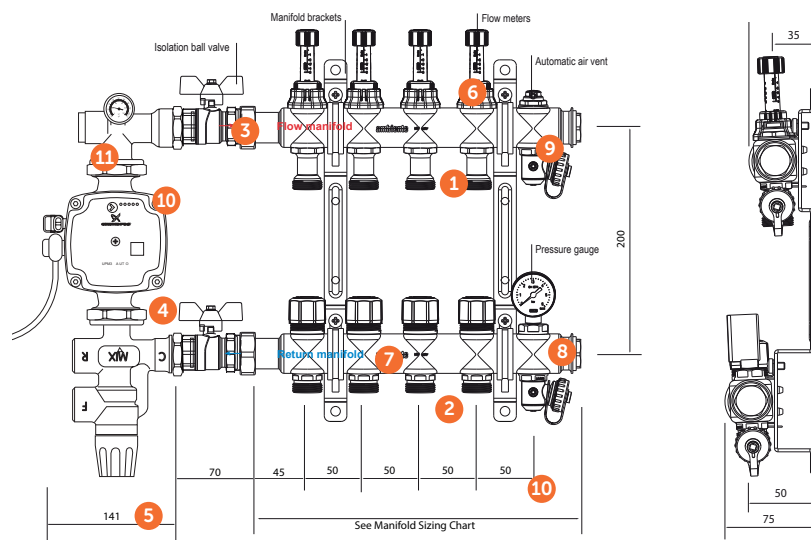
Ambiente manifolds are supplied ready assembled and simply need mounting on brackets prior to installation.

Note that the two manifold bars are offset so that the pipes can pass behind the lower bar for connection to the top bar – we recommend using the top bar as the flow and the bottom bar as the return. The manifold comes left-handed as standard, but can be changed, see opposite for 'how to change the handing of Ambiente manifolds'.

Manifolds should be positioned where they are easily accessible to allow for future servicing and commissioning. We recommend allowing at least 200mm between the finished floor level and the bottom of the manifold, with 75mm clearance above and at least 50mm at either side.



- 1 Manifold flow bar
- 2 Manifold return bar
- 3 Isolating ball valves
- 4 CircoMax circulating pump
- 5 Blending valve
- 6 Flow meter
- 7 Actuator head (shown with pre-install caps)
- 8 Pressure gauge
- 9 Air vent
- 10 Filling taps
- 11 Temperature Gauge



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

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.



# COMMISSIONING THE SYSTEM

## STEP BY STEP CHECKLIST

### Filling and flushing the system

Sequence	Checklist	Completed
1	Close the isolating ball valves that are connected to the manifold on both bars.	<input type="checkbox"/>
2	Isolate all zones by screwing down the blue caps on the bottom (return) bar and the flow meters on the top (flow) bar.	<input type="checkbox"/>
3	Open the first flow meter (start furthest away from the filling valve) on the top (flow) bar (use the red collar to turn the black section fully anti-clockwise, do not use grips – hand tight only). Ensure that all other flow meters are closed, except the loop that you are flushing.	<input type="checkbox"/>
4	Remove the black plastic blanking cap from the filling valve on the top (flow) bar and fit the hose connection/hose which should be connected to the mains water supply. Open the filling valve using the key on the reverse of the drain valve cap.	<input type="checkbox"/>
5	Fix a suitable hose to the drain valve on the bottom bar.	<input type="checkbox"/>
6	Fully loosen the blue protection cap on the bottom bar on the first zone to be filled.	<input type="checkbox"/>
7	Open the tap on the mains water supply and open the drain valve on the bottom bar using the key on the reverse of the blanking cap.	<input type="checkbox"/>
8	Run water through the loop until air is removed from the system, closing down the blue caps on each loop as it is purged.	<input type="checkbox"/>
9	This can now be repeated for each zone by opening the next zone, closing the flushed zone and repeating steps 3-8.	<input type="checkbox"/>
10	At this point the system can be pressure tested if required by closing the drain valve and unscrewing all the blue protection caps – the pressure should rise slowly – allow it to rise to 4 bar and then close the filling valve and close off the mains water. This should be left for 24 hours to check for any significant drops in pressure.	<input type="checkbox"/>

### Pressure testing using an air compressor

Sequence	Checklist	Completed
1	Close the isolating ball valves that are connected to the manifold on both bars.	<input type="checkbox"/>
2	Open all zones by unscrewing the blue caps on the bottom (return) bar.	<input type="checkbox"/>
3	Open all flow meters on the top (flow) bar – use the red collar to turn the black section fully anti-clockwise.	<input type="checkbox"/>
4	Open the filling valve using the key on the front of the blanking cap and connect the compressor hose up to it. Make sure the drain valve is closed.	<input type="checkbox"/>
5	Turn on the air compressor and allow the pressure to rise to 4 bar. Once the desired level has been reached, close the filling valve using the key on the blanking cap. This should be left for 24hrs to check for any significant drops in pressure.	<input type="checkbox"/>

### Change the handing of Ambiente manifolds

Sequence	Checklist	Completed
1	Reverse the handing of the two manifold bars on their brackets.	<input type="checkbox"/>
2	Remove the mixing valve from the base of the pumpset by undoing the nut that connects the two together.	<input type="checkbox"/>
3	Unscrew the blanking cap from the base of the mixing valve. Note: this has a left-handed thread.	<input type="checkbox"/>
4	Then unscrew the pump connection from the top of the mixing valve. Again, this has a left-handed thread.	<input type="checkbox"/>
5	Rotate the mixing valve through 180 degrees and swap the blanking cap and pump connection around.	<input type="checkbox"/>
6	Remount the mixing valve onto the pumpset, making sure you use the rubber washers provided.	<input type="checkbox"/>

# RECORD AND REPORT

## Site details

Site name

Date

Address

Reference

Technician

Floor level

Pipe reference

Manifold reference

## Please tick the appropriate boxes

☐ Installation

☐ Re-pressurise

☐ Repair

Test method Hydraulic (Water)

☐

Period of test

Min 30 mins

☐

Test method Co<sup>2</sup> (air)

☐

Test pressure

Min 4 bar

☐

Sufficient room to attach pumpset (minimum 250mm required)

☐ Yes

☐ N/A

Has the manifold label been fitted?

☐

## Description

Yes

No

Comments

System left drained

☐☐

System left full of water

☐☐

System left under pressure

☐☐

Signature of tester

Print name

Date

Signature of witness

Print name

Date

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