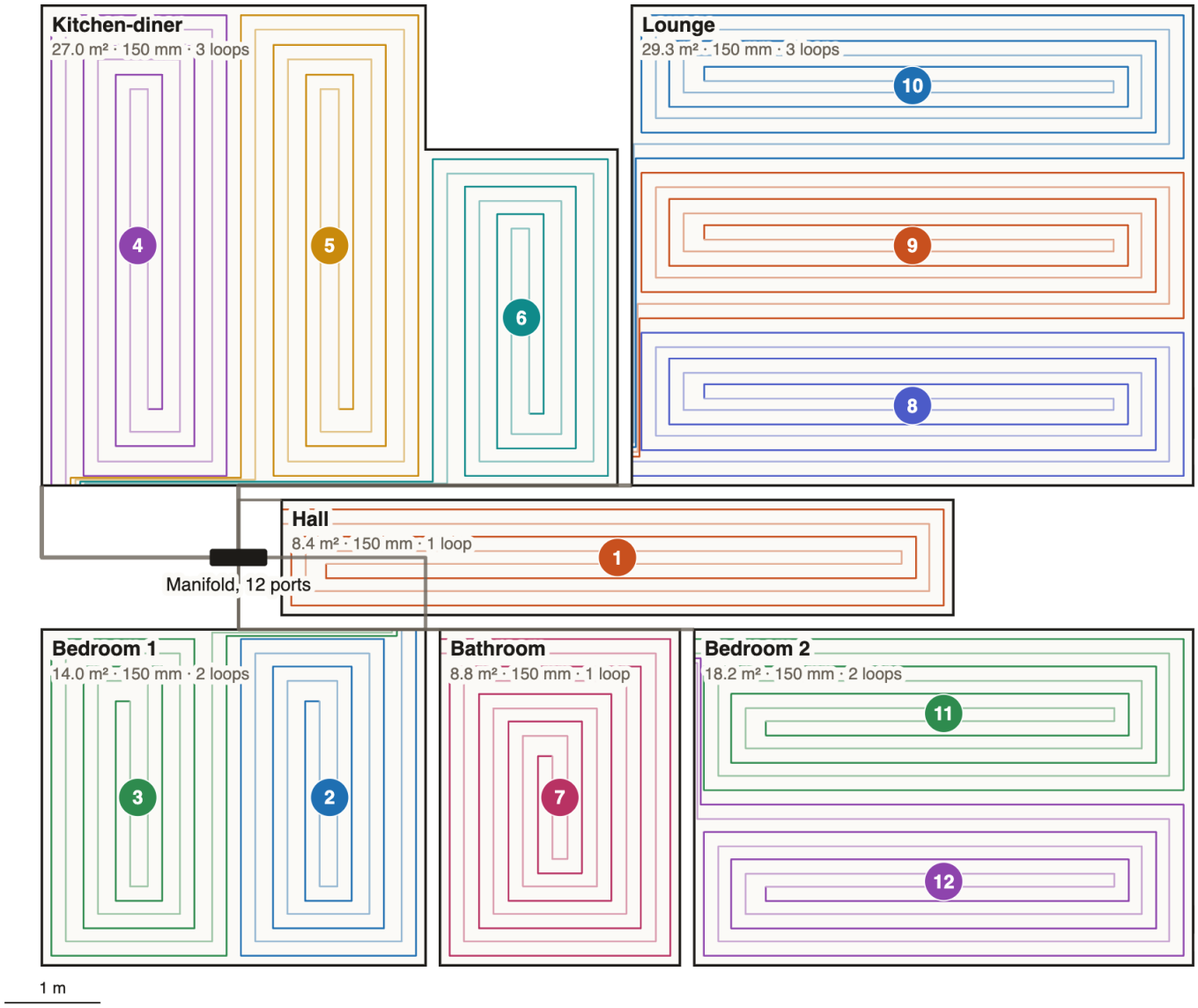
Underfloor heating layout: Sample bungalow

9 October 2026 · underfloorplanner.com · drawn to scale, loops numbered by manifold port



Summary

Rooms	**6**
Heated area	**105.6 m²**
Loops (manifold ports)	**12**
Pipe, 16 mm	**816 m**
Spacing (house)	**150 mm**
Pattern	**Counterflow spiral**
Flow / return	**35 / 30 °C**
Floor output	**4636 W**
Heat loss entered	**4320 W**
Total flow	**12.5 l/min**
Worst loop, pipe drop	**5.2 kPa**
Screed	**Sand & cement screed**

Lounge needs 37.1 °C flow to meet its heat loss.

Manifold schedule

Set each flow meter to the flow shown. Lengths include both tails and 0.5 m down from the manifold; the drop is for the pipe only, without manifold and valves.

PORT	ROOM	LOOP	LENGTH	TAILS	AREA	FLOW	PIPE DROP
1	Hall	1	58.5 m	3.4 m	8.4 m²	0.87 l/min	1.3 kPa
2	Bedroom 1	1	49.0 m	6.7 m	7.0 m²	0.75 l/min	0.9 kPa
3	Bedroom 1	2	52.7 m	10.4 m	7.0 m²	0.75 l/min	1.0 kPa
4	Kitchen-diner	1	66.8 m	7.0 m	10.0 m²	1.18 l/min	3.6 kPa
5	Kitchen-diner	2	70.5 m	10.6 m	10.0 m²	1.18 l/min	3.8 kPa
6	Kitchen-diner	3	56.7 m	14.4 m	7.0 m²	0.82 l/min	1.2 kPa
7	Bathroom	1	63.1 m	7.0 m	8.8 m²	1.30 l/min	4.1 kPa
8	Lounge	1	79.5 m	11.0 m	9.8 m²	1.25 l/min	4.8 kPa
9	Lounge	2	82.6 m	14.0 m	9.8 m²	1.25 l/min	5.0 kPa
10	Lounge	3	85.6 m	17.2 m	9.7 m²	1.25 l/min	5.2 kPa
11	Bedroom 2	1	73.5 m	12.4 m	9.1 m²	0.94 l/min	1.7 kPa
12	Bedroom 2	2	76.7 m	15.5 m	9.1 m²	0.94 l/min	1.8 kPa

Rooms

ROOM	AREA	COVERING	SPACING	LOOPS	OUTPUT	HEAT LOSS	FLOOR
Kitchen-diner	27.0 m²	Tile or stone	150 mm	3	1543 W	1100 W	25.0 °C
Lounge	29.3 m²	Engineered wood	150 mm	3	1096 W	1300 W	24.7 °C
Hall	8.4 m²	Tile or stone	150 mm	1	480 W	300 W	24.5 °C
Bedroom 1	14.0 m²	Carpet, 1.5 tog with underlay	150 mm	2	442 W	520 W	24.2 °C
Bathroom	8.8 m²	Tile or stone	150 mm	1	500 W	450 W	25.9 °C
Bedroom 2	18.2 m²	Carpet, 1.5 tog with underlay	150 mm	2	575 W	650 W	24.2 °C

Parts

ITEM	QUANTITY
16 mm pipe	816 m · 2 × 500 m coils
Manifold	12 ports
Actuators	12, one per port
Room thermostats	6
Edge insulation strip	105 m
Sand & cement screed	6.86 m³ at 65 mm

Method: loop layout, lengths and tails as drawn; heat output per EN 1264-2 (pipe in screed), floor temperature per EN 1264 base curve; flows from each loop’s share of the room heat at the set drop; pressure drop by Darcy–Weisbach for straight pipe. A design aid: check against the pipe maker’s data and a room-by-room heat-loss calculation before installing.