

Hydronic Proposal

Main System

Supply and installation of Hydronic system

Thermostats

Amber DT-Two+ - Wifi Programmable

Ancillaries

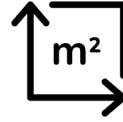
2 A-Rated Mixing Pumpsets - Supp

Quotation Allowances

Project Summary

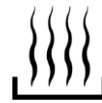
Area Allowances

Number of Areas Heated: 2
Total Project Area: 142.7m²



Heat Allowances

Heat Source: Heat Pump
Flow Temperature: 40°C
Return Temperature: 30°C
Pipe Spacings Quoted:
150mm



Product Allowances

Pipe: 16mm UFH Pipe
Thermostats: 6
Smart Hubs: Not required/Included
Timeclocks: Not required
Wiring Centres: 2
Thermal Actuators: 12
Floor Sensors: 6
Remote Air Sensors: 0
UFH Circuits: 12
Manifolds: 2



Thermostat, Timeclock, Sensor, & Smart Hub quantities only apply to applicable control options

System Allowances

This Proposal Includes for the Following System:
In-Screed, pipe clipped to Insulation



Our quotation is based on

Installation in 1 call-off, additional installation call-offs charged at £475 each
Commissioning based on 1 call-off

Any price fluctuations may mean this price is reviewed
If required a certified pressure gauge can be supplied at an additional cost.
Any specific delivery requirements including but not limited to FORS, CLOCS, or any specialist courier service, must be brought to our attention. This may incur additional costs.

Underfloor Heating System Information

Floor Manifold Manifold	Qty	System
GF Manifold 2 Manifold 2	1	Screed (Clipped)
GF Manifold 1 Manifold 1	1	Screed (Clipped)

Manifold Schedule

Manifold	Rooms
Manifold 2	Utility, WC
Manifold 1	Entrance hall, Kitchen Dining area, Living area, Lounge, Study

Project Notes

Comments from our Design Team:
*En-suites, Bathrooms & WC's share control with adjoining rooms (Hall/Bed), with separate UFH loop allowed as potential different floor finishes, flow rates and pipe centres required.
Pipe connections to the manifold are not supplied / fitted
Should the UFH pipework need to pass through walls to serve heated areas, this is to be carried out on site, by others.
If pipework is required to transition levels, it is the clients responsibility to ensure allowance is made for this on site, by others.
Screed system (Clipped): UFH pipework attached to insulation with polythene membrane, encapsulated in screed
Insulation has not been allowed for within the UFH quotation, separate pricing can be provided on request.
Price allows for pipe sleeving of flow pipework only, subject to client confirming requirement.

Revision Notes

Revision notes from our Design Team:
Rev 0 (22/11/24): Initial Quote
Rev 1 (02/01/25): Revised to latest drawings
Rev 2 (23/04/26): Revised to latest plans & pricing

Drawings Used

Note: It is the responsibility of the purchasing organisation to ensure that the correct drawings, apartment types, design parameters and "u" values have been provided for Qualis to design to and that the details are an accurate reflection of the project requirement. Pricing is subject to change upon disclosure of a change in specification from above.

Drg No. / Filename	Date	Rev.	Drawing Title
042_202	01/09/25		

Product Overview

Please see below a system breakdown, which details the following floor heating components that are included within our proposal.

Gaia Hydronic Pipe

Gaia underfloor heating pipe is ultra flexible and lightweight and can be simply rolled and clipped using fixing clips without springing back.



Gaia Underfloor Heating Actuator

Precision engineered actuator with a combined wax/copper element giving a both reliable and smooth operation of the heating zone.

Built to last, the actuator has an easy to use grip collar for simple installation and maintenance. A pop-up indicator easily indicates the actuator status.



Gaia Hydronic Manifold

The manifold is used for controlling water flow in the floor heating system. Each piped zone is connected to the manifold making it possible to control the heat supplied to the room.

The manifolds, ranging from 2 to 12 ports include adjustable flow gauges, drain and fill valves, air vents, two isolation valves, offset flow and return rails.



Gaia 230V Wiring Centre

The Gaia 230V wiring centre is an 8 way wiring centre for controlling 230V heating supplies. It can be used to control up to 8 underfloor heating zones with 230V thermostat control.

Up to two thermal actuators can be connected per zone, allowing up to sixteen UFH circuits in total.

Multiple circuits can be controlled by a single zone control thermostat, up to eight in total.

(24V wiring centres available where required)



Thermostat Options

Amber DT-One Thermostat

The Amber DT-One is a fully programmable touch screen thermostat, designed to be used with electrical floor heating elements.

Allowing you to set 6 periods each day with corresponding pre-set temperatures, with a choice of either 'manual' or 'period control' mode. Equipped with energy saving functions such as sensor setup and frost protection mode to help reduce heating costs.

- Touch screen Operation
- Fully programmable 7-day, 6 period programmes
- Sensor setup
- Frost protection mode
- Screen Lock
- 2 Year Warranty



Amber DT-Two+ Thermostat

The Amber DT-Two+ is an intuitive Wi-Fi programmable thermostat which can be used to control the underfloor heating remotely. It will keep a home at a comfortable temperature whilst minimising energy use.

This thermostat can also operate as a standalone unit, and is fully programmable with an easy user interface and touch buttons.



Sensor Information

Floor Sensor cable

- 3 meter length
- Compatible with multiple thermostats
- Temperature range -10°C - +50°C



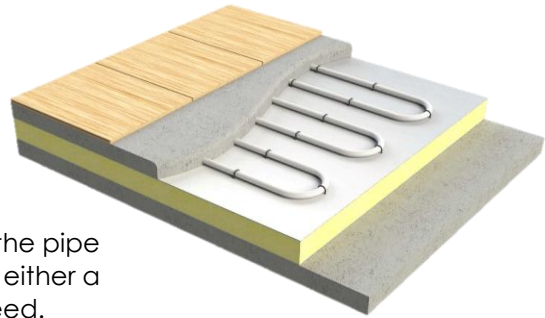
Floor Construction

Solid Screed Heating - Clipped

Solid Screed System is the most popular wet underfloor heating system, this solution can be used to install the underfloor heating pipes within a screeded floor.

Clipped direct with staples

A thermal insulation board is laid directly onto the solid sub floor first, ensure a 500G Polythene membrane is installed over it or the insulation joints are taped.



The pipe work is clipped directly into insulation, once the pipe work has been pressure tested, it is then covered with either a sand and cement screed or a pumped anhydrite screed.

Estimated Heating Output (W/m²)

Quoted	Pipe Centres	Room Temp	Floor Finish & Resistance			
			0.02m ² K/W Tile/Stone	0.05m ² K/W Vinyl	0.1m ² K/W Wood	0.15m ² K/W 1.5 TOG Carpet
	100mm	20°C	77	65	52	43
		21°C	71	60	48	40
		22°C	65	55	44	37
✓	150mm	20°C	67	58	47	39
		21°C	63	54	44	37
		22°C	58	49	40	34
	200mm	20°C	59	52	43	36
		21°C	55	48	40	34
		22°C	51	44	36	31
	250mm	20°C	52	46	39	33
		21°C	49	43	36	31
		22°C	45	39	33	28
	300mm	20°C	46	41	35	31
		21°C	43	38	33	28
		22°C	39	35	30	26

Red highlighted text indicates all outputs that exceed 27°C floor surface temperature

Estimated heating outputs in accordance to BS EN 1264 for 16mm UFH pipe.

Figures based a mean water temperature of 35°C (40°C Flow, 30°C Return). Heat source is Heat Pump.

Terms of Sale

What is included?

Includes all materials as detailed in the System Breakdown and cost of labour to install, if required, as per Gaia design. The thermostat controls are issued to the electrical contractor for installation. All other components to be provided and installed by others. This proposal is based upon the number of days install as detailed in the pricing breakdown of this document, additional visits will be charged at £450 plus VAT per visit; please note that projects below the value of £5,000 + VAT do not include for separate inductions visits, unless previously advised/agreed with Gaia. The quotation allows for matching heat loss only. Price subject to re-measure upon receipt of order.

What isn't included?

Unless specifically detailed with the proposal, the following are not included:

Marking out, it is the responsibility of site and this must be completed prior to our arrival. Supply and/or installation of latex. Installation and/or commissioning of controls which are issued to the electrical contractor. Gaia can quote to commission controls once installed by your qualified electrician, consisting of set up, test and sign off, ask for a quote. Heat loss calculations, these would be carried out on receipt of an order. All circuit wiring, connections and fuse boards-please see method statement for guidance. Gaia are not responsible for levelling floors nor providing a system that will level a floor. Prior to installation it is expected that the floor will be flat and level ready for installation of the floor heating system, any undulations or discrepancies in the floor will be mirrored by our installation. Bathrooms and en- suites may require supplementary heating. Please note that projects below the value of £5,000 + VAT do not include for separate inductions visits, unless previously advised/agreed with Gaia.

Other Price Criteria

Drawings as listed in schedule

All pricing provided is based solely upon specification and design as per the details provided within this proposal. Pricing is subject to change upon receipt of amendments to the specification, drawings and/or design as required. Any changes and/or amendments received after ordering may be subject to a variation to the contract and/or order value. Any amendments or changes must be notified to Gaia prior to ordering.

Building regulations as a minimum

The above is based on a design day temperature of - 3°C (Still air condition). The design assumes that construction will be in accordance with current building regulations and will conform to the current 'U' values (W/m²K). Where a polythene is used, this should be fixed flat and true (glued in middle and taped at edges) prior to Gaia arrival on site. Products to be off loaded by others due to the use of external delivery company. Price is valid for 30 days and is subject to £30.00 + VAT delivery to mainland UK only unless otherwise stated. For deliveries to the Isles, please apply for price.

Maintenance and Repair

In the unlikely event that a repair may be required on a heating installation, Gaia will work closely with all parties to identify and repair the fault. Where the identified fault is under the Gaia manufacturer's warranty, Gaia will either free issue a replacement thermostat or attend site to repair the cable. Details of the fault-finding process, site requirements and terms and conditions of repair are provided later in this document

Commissioning

Requirements before commencement of commissioning

- Gaia require a minimum of 14 days' notice to attend site
- All power supplies are on and heating controls are connected
- All areas are clear and floor coverings are fitted (to enable floor temperature checks)
- Heating system (including underfloor heating) has been flushed, filled, treated and purged of air
- Manifold needs to be easily accessible for adjustments to be made

Heating boiler needs to be in a position to be run and brought up to temperature to enable checks on flow and return temperatures

commissioning

- Confirm all thermostats switch and call for heat
- Confirm all actuator heads are operating correctly
- Check water flow temperature entering manifold
- Balance and set flow rates of each zone on manifold
- Check return water temperature to manifold
- If fitted check zone valves are operating
- Check pump speed setting
- Commissioning certificate produced for each plot

Where system commissioning has been included, Gaia will only commission the thermostat, the setup of the WiFi-hub has to be completed by the homeowner once they have their internet connection

Insulation notes

Insulation to be delivered and offloaded by others. All insulation to be stored in dry and secure area (storage provided by others). Insulation may be delivered in an artic Lorry, if this is not acceptable, please notify Gaia to enable a revised quotation. Perimeter strips to be trimmed by others, these allow for internal party walls only / external walls to each apartment only. Storage to be provided by others. Price does not allow for delivery with forklift. The insulation detailed within this quotation is solely provided for based upon the thermal performance of the product. It is the responsibility of the ordering customer to approve the insulation for any other specification details that may be required which are outside of the thermal performance criteria.

You will also receive full O&M manual documentation, as well as user guides - (one per dwelling) as required.