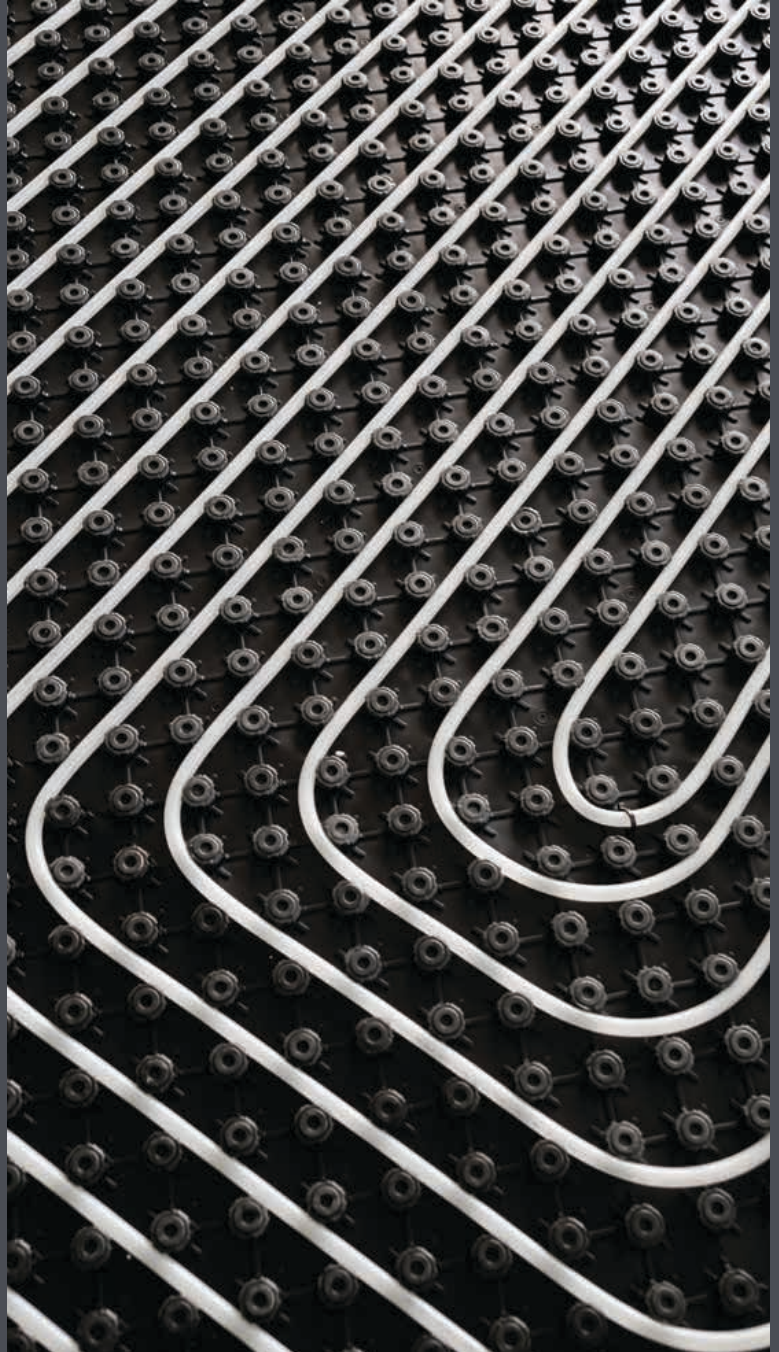


Underfloor Heating

TECHNICAL GUIDE



Complete Underfloor Heating
System Design & Specification

Heat
Merchants



Contents

HEAT MERCHANTS TECHNICAL
DESIGN TEAM PROVIDE COMPLETE
UNDERFLOOR HEATING SYSTEM
DESIGN & SPECIFICATION FOR NEW
BUILD AND RETROFIT PROJECTS.

CONTACT YOUR LOCAL BRANCH
FOR MORE DETAILS OR TO REQUEST
A DESIGN.

CONTACT US

090 6424000
enquiries@heatmerchants.ie
www.heatmerchants.ie

Heat Merchants Design Services	3
---	----------

Introduction	4
---------------------------	----------

Underfloor Heating Design Principles	5
---	----------

Heat Outputs and Design Limits	5
--------------------------------------	---

UFH Pipe Spacing	6
------------------------	---

Pipe Layout	6
-------------------	---

Floor Build-ups	6
-----------------------	---

Underfloor Heating Components

Multi-Layer Pipe	7
------------------------	---

Self Adhesive Clip Rail	8
-------------------------------	---

Rail Clip Staples	8
-------------------------	---

Black Clips	8
-------------------	---

Manifold	9
----------------	---

Flowmeters	10
------------------	----

Accessories

Ball Valves	11
-------------------	----

Edge Insulation Strips	11
------------------------------	----

Corrugated Sleeve	11
-------------------------	----

Expansion Joint Profile	12
-------------------------------	----

Pipe Cutters	12
--------------------	----

Tacker Gun	12
------------------	----

Pipe De-coiler	12
----------------------	----

Polycomfort Panel	13
-------------------------	----

Polycomfort with Insulation	13
-----------------------------------	----

HEATRACK

Single HEATRACK Panels	14
------------------------------	----

Pre-Assembled HEATRACK Panels	14
-------------------------------------	----

U Turn HEATRACK Panels	14
------------------------------	----

Silicone for HEATRACK	14
-----------------------------	----

Heating Controls

Overview	15
----------------	----

Polytherm Room Controls	16
-------------------------------	----

Non Programmable Thermostat	16
-----------------------------------	----

Programmable Thermostat with touch-screen	17
---	----

Programmable Thermostat with WiFi and App Control	17
---	----

Remote Air Probe/ Floor Sensor	18
--------------------------------------	----

Polytherm 230V Wiring Centre	18
------------------------------------	----

Polytherm Electric Actuator	18
-----------------------------------	----

Internet Gateway for Poly WiFi	19
--------------------------------------	----

Heat Merchants Design Services

Heat Merchants

The Heat Merchants Technical Services team can provide a complete design for heating and hot water; plumbing, mechanical ventilation and drainage for domestic projects.

We provide a bespoke solution with a comprehensive technical design including product specification, full schematics and drawings which will be in accordance with current building regulations and best practices.

All designs are supported by professional indemnity insurance which offers a guarantee that systems will perform as intended when installed in accordance with our design.

We also offer support services including estimation and specification, commissioning, ancillary certification, after-sales service and installer training.

TECHNICAL SUPPORT SERVICES

- Technical Design
- Commissioning
- Ancillary Certification
- Technical Support
- Service & Maintenance
- Installer Training
- Estimation Service
- Expert Advice
- Professional Indemnity Insurance
- Assistance with SEAI Grant Application



Heat Merchants Technical Design Team will provide a full technical design and product specification for heating, plumbing and mechanical ventilation into both a new build or an existing domestic building.

This design will be bespoke to each individual property.

- All calculations are based on SR50-1-2021: Code of Practice - Part L - Domestic Plumbing & Heating
- All calculations and data will be provided to the BER Assessor so compliance with regulations can be confirmed
- The design provided is covered by Professional Indemnity if installed as per specifications based on the information provided.
- Any changes in dimensions, U-Values will require the calculations to be amended.
- We can also provide commissioning, design sign off and ancillary certification.

Service and Maintenance

Service and maintenance plans for your Panasonic heat pump are provided through our nationwide network of service engineers. Regular maintenance is required to ensure you get the maximum performance from your heating system and to extend the lifespan of your heat pump. Annual servicing by a Panasonic trained professional is also required to fulfill the conditions of your heat pump warranty.



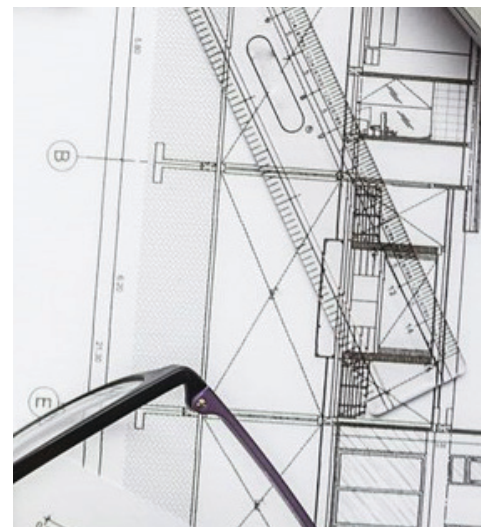
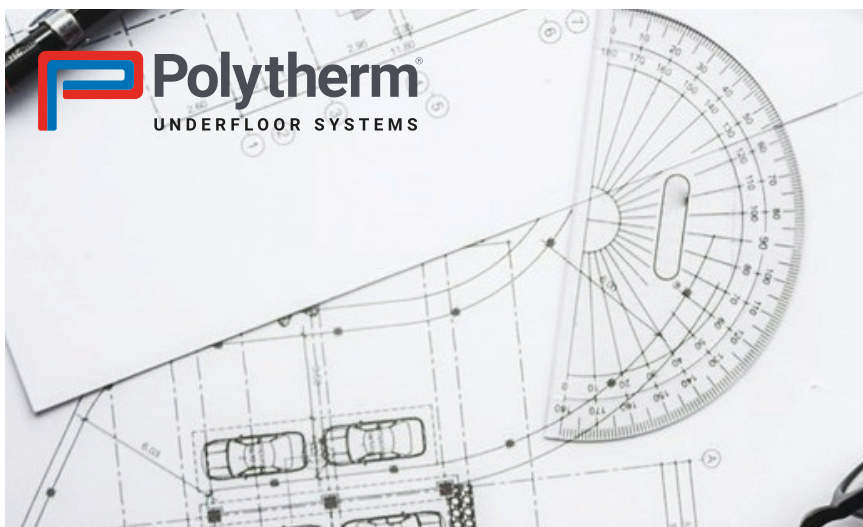
Introduction

Underfloor Heating System Design

The Polytherm underfloor heating system is backed up by technical design and expertise from our team of design engineers. When we receive your project specifications or floor plans we will complete relevant heating calculations and supply a product specification and quotation. Once the system is ordered the complete system design with the specific heat outputs and the flow rates for each UFH loop will be provided. We also provide comprehensive UFH drawings indicating manifold locations, UFH loop directions, loop lengths and cutting schedules.

This guide gives an overview of underfloor heating principles and outlines the components which make up a Polytherm Underfloor System.

OUR DESIGN TEAM PROVIDE BESPOKE UNDERFLOOR HEATING SYSTEM DESIGNS AND PRODUCT SPECIFICATION WITH COMPREHENSIVE UNDER FLOOR HEATING DRAWINGS INDICATING MANIFOLD LOCATIONS, LOOP DIRECTIONS, LOOP LENGTHS AND CUTTING SCHEDULES.



All designs are in accordance with building regulations and best practices to ensure the system will perform as specified and provide homeowners with a warm, comfortable home. When the system is installed as specified we offer a comprehensive system warranty which covers not only individual components but the entire heating system, giving installers and homeowner complete confidence in the system's quality and reliability.

Polytherm underfloor heating system and components are manufactured to the highest standards and our experienced team of specialist engineers and technicians provide complete underfloor system design and specification using the information supplied for each individual project. All designs are in accordance with building regulations.

It is vital that the installation of the system be carried out in accordance with the design and all guidelines are adhered to as once the system is installed and is concealed it is difficult to make any changes to the system. Our technical team are on hand to offer any support or guidance to installers should you have any queries but installers are responsible for ensuring the integrity of the installation.

Underfloor Heating Overview

Underfloor heating pipes are laid within the floor construction with warm water circulating so that the floor becomes one large low temperature radiator. As there is a large floor area the system will only need to run a couple of degrees higher than air temperature to provide a comfortable warmth to a room.

The aim for UFH design is to create an even surface temperature across the floor area within a building which will ensure a uniform comfort level throughout the structure. An UFH system can be set 1-2 degrees lower (ambient) than a conventional radiator system. This reduces waste heat at levels above head heights and in turn saving on fuel costs.

Underfloor heating offers many benefits to homeowners.

- It is a energy efficient method of heating particularly when combined with low temperature heat sources such as air to water heat pumps.
- As heat is distributed evenly and floors will feel warm underfoot this provides a comfortable living environment.
- Walls remain unobstructed by radiators giving greater design flexibility.
- As there are no sharp edges, obstacles or hot surfaces underfloor heating can be a safer option.
- Underfloor heating is a good choice for those with allergies as less air movement means less allergens are circulated.

With an underfloor heating system, the materials and methods of heat distribution are as follows:

- UFH has a central distribution point, the manifold, which is serviced from the main heat source and distributes the hot water to the UFH pipes.
- UFH is operated with a low flow and return water temperature which means the system operates excellently with Heat Pump technology.
- UFH uses the whole floor surface area as a heating medium, which takes away the conventional radiators and leaves the end user with more wall space.

Heat Outputs and Design Limits

Generally, the maximum heat output from an underfloor heating system is between 70 and 100 W/m². The actual output achieved is a direct relationship between the difference in floor surface and room air temperatures. The floor construction, floor covering material, pipe size, pipe spacing, and the temperature of the water circulating through the UFH pipes are major factors that determine the floor surface temperature.

Given the low U-values stipulated in current Building Regulations, it is unusual for a new build to require outputs greater than 35-40W/ m², based on a 20°C internal design temperature. BS EN1264-2 states that the maximum floor surface temperature is 9°C above the room temperature in occupied areas and bathrooms, in order to achieve an acceptable level of foot comfort. This results in a maximum floor surface temperature of 29°C in an occupied space with a room temperature of 20°C. A 9°C temperature difference will equate to a floor heat output of 100W/m². Heat loss calculations for the building should be carried out by a heating consultant or engineer at the start of every UFH project.

Note: If your heating system uses a high temperature heat source you may need a mixing station to ensure that the maximum floor temperature is not exceeded we provide a mixing station, integrated with a pump to be placed at each manifold. Our design team will specify this if it is required.



UFH Pipe Layouts

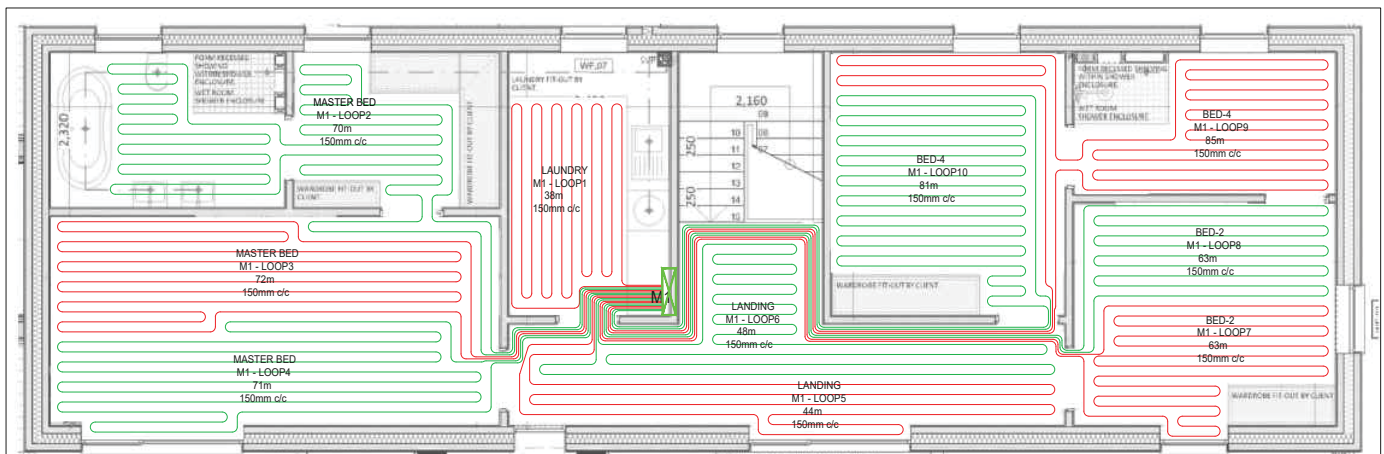
UFH Pipe Spacing

The pipe spacing is determined by a number of different factors, pipe size, heat source and which Polytherm underfloor system is being used. For a domestic setting the most common scenario is 16mm pipe at 150mm spacing with a heat pump as the heat source. In this instance, tighter pipe centres will allow for lower hot water temperatures and result in improved efficiency and lower energy costs. For a commercial UFH the pipe may be increased to 20mm pipe and 300mm spacing depending on the scope of the project, primary flow temperatures and floor build up. Areas with high heat loss may need tighter pipe centres, these areas include, highly glazed areas such as a conservatory, rooms with high ceilings, bathrooms with limited floor area and poorly insulated buildings.

Pipe Layout

There are a number of different ways to lay the pipe within a room, some patterns are meander, double meander and spiral methods. The most common of these are the meander and spiral. Where possible, the pipe should be laid so that the flow direction is to the coldest area of the room first, e.g. under windows, along outside walls.

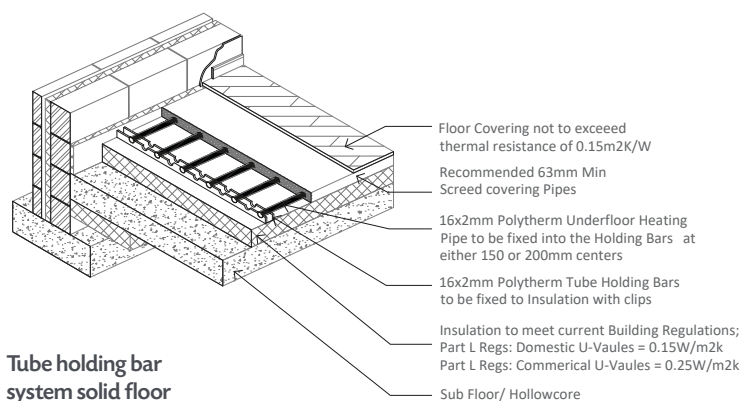
Technical designs showing typical floor layout



Floor Build-Up

The thermal resistance of the finished floor covering also has to be considered in the design of the floor build-up. The floor supplier will have this information. It is recommended that the max thermal resistance does not exceed 0.15m²K/W.

Floor build-ups must meet the standards of the relevant building regulations. The relevant Building Regulations that must be adhered to are the Technical Guidance Documents Part L - Conservation of Fuel and Energy - Dwellings (2022).



UFH Components

Underfloor Heating Multilayer Pipe

U35684 - 200m Coil

U35685 - 500m Coil

The Polytherm UFH pipe is a light gauge multilayer pipe. The maximum operation temperature is 70°C at a 6 bar pressure. The UFH pipe is available in 16x2mm and in both 200m and 500m coils.

PE-MD / AL / PE-HD

- Quick laying even on large surfaces; allows easy bending thanks to the thin aluminium layer, low weight and rapid installation.
- Stable in form, preventing spring back.
- High product and processing safety through uniform layer structure as well as equal calculable properties for the entire pipe circumference (each individual layer is checked).
- Resistant to temperature and pressure requirements in surface heating and cooling applications.
- Corrosion-free for long service life.
- Encrustation-free, therefore no cross-section constriction, reduced pressure losses and constant flow speed.

Pipe Dimension (mm)	16 x 2
Outer diameter, nominal size (mm)	16
Wall Thickness (mm)	2
Inner diameter, nominal size (mm)	12
Pie weight (g/m)	113
Pipe weight with water (g/m)	226
Internal volume (L/m)	0.113
Heat conductivity (W/m.K1)	0.43
Expansion coefficient (mm/m.K)	0.024
Surface Roughness (inner pipe) (m)	1.5
Oxygen diffusion (mg/l.d)	0
Max operating Temperature"	70
Max operating pressure (at 70°C) (bar)	6
Malfunction temperature (°C)	95
Bend radius, freely bent	≥ 5 x D
Bend radius with bending tools	≥ 3.5 x D



Aluminium layer butt welded without overlap.

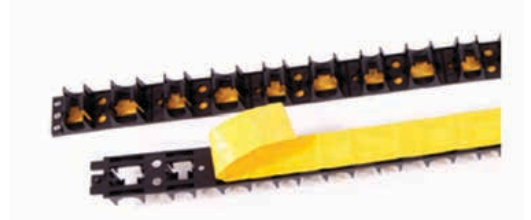


UFH Components

Self Adhesive Clip Rail

1m lengths - Box 100

Tube Holding Bars are manufactured from polypropylene and can be supplied to accommodate 16x2mm UFH pipe. The function of the rail is to ensure the UFH loops are fixed in the correct pattern before the screed is poured. The tube holding bars are attached to the insulation in the floor using self adhesive backing or clips.

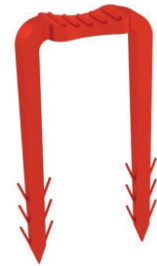


Product Code	Tube Distance	Height	Width
UA6271	50mm	25mm	40mm

Rail Clip Staples

For additional support red fixing clips can be used to secure the fixing rail.

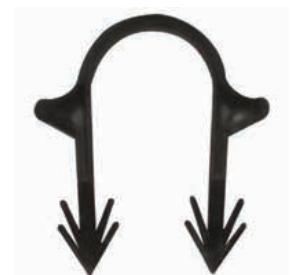
Product Code	Tube Distance	Box
UA6267	50mm	250
UA6268	65mm	200



Black Clips

These clips are used to secure the underfloor heating pipe onto the floor insulation. These are fixed either by hand or using a fixing gun.

Item	Length	Colour	Qty	Weight (Approx)
UA6269	40mm	Black	250	2.0kg
UA6270	60mm	Black	300	0.9kg



UFH Components

Polytherm Manifold Type FBH-VL-RL Stainless Steel

02-12 Port Available

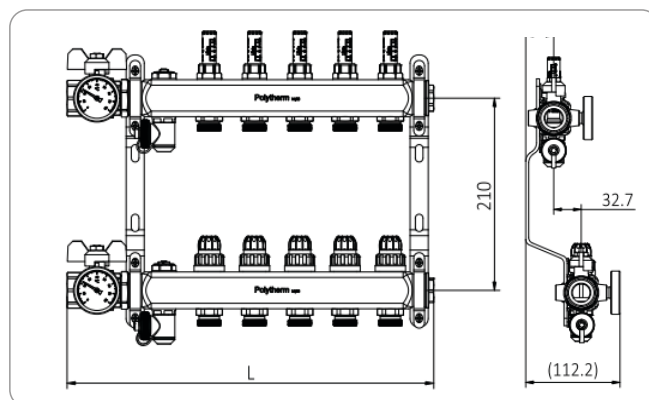
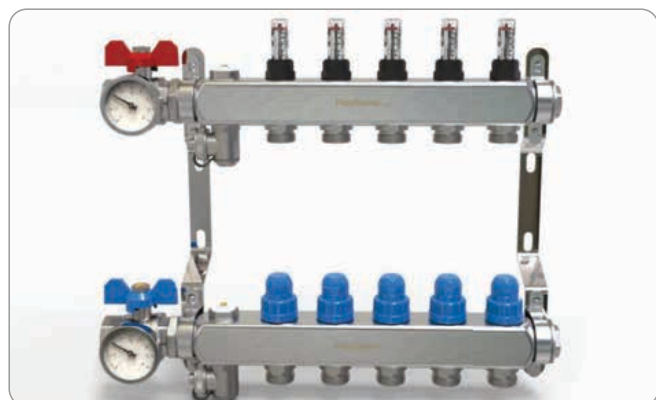
The Polytherm underfloor heating system's focal point is its stainless-steel manifold. The manifold acts as a radiant epicentre for the flow and return distribution throughout the piping system while regulating the mass flow of individual low temperature heating circuits. Each pipe circuit is secured to the ports of the manifold through compression adapting unions (10.5x1.25mm /16x2mm /20x2mm).

Polytherm Manifolds distribute the heating fluid from the buildings heat source to each circuit and allow for the isolation and control of flow rates. Our Underfloor heating will operate in conjunction with regular boilers, but most effectively with heat pumps due to the low circuit temperatures required.

A fully furnished manifold for 2-12 heating circuits is light and durable, with stainless steel body.

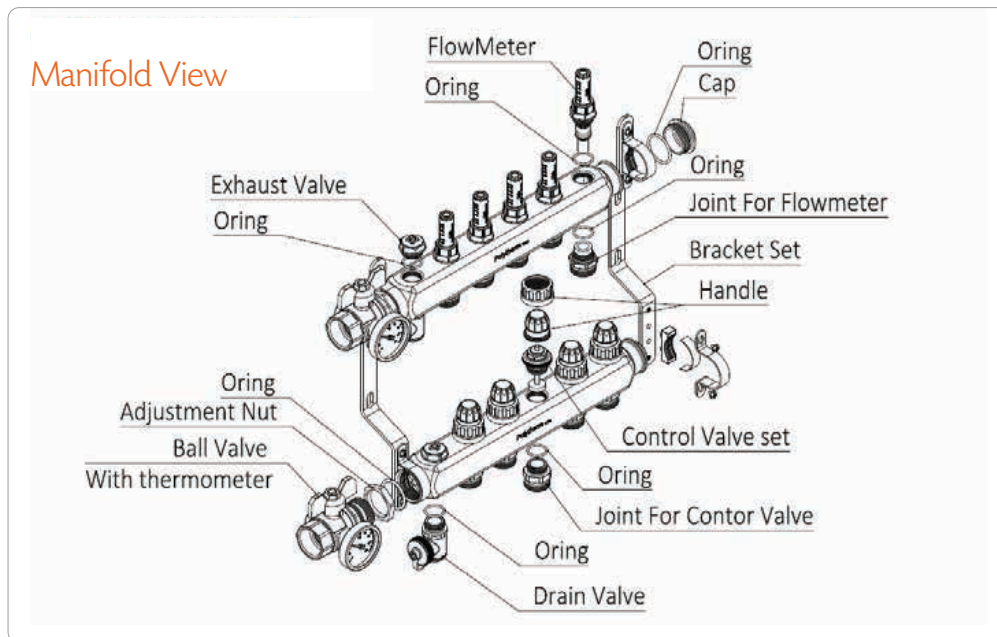
- The thread specification for the drain valve of the underfloor heating manifold is G3/4.
- The thread of the water separator connection is G3/4.
- The operating range of the thermometer is 0-80 degrees Celsius.
- The measuring range of the flowmeter is 0-5 L/min.
- The internal thread of the ball valve is G1.
- The thread conforms to the ISO228/1.
- The external thread of the control valve spool is M30x1.5.

Circuits	Size (Length)	Code
2	255 mm	U95979
3	305 mm	U95980
4	355 mm	U95981
5	405 mm	U95982
6	455 mm	U95983
7	505 mm	U95984
8	555 mm	U95985
9	605 mm	U95986
10	655 mm	U95987
11	705 mm	U95988
12	755 mm	U95989





UFH Components



Flowmeters 0 – 5 L/min

Hydraulic calibration is done while the circulating pump is operating and thermostatic valves are open.
After regulation of all heating circuits, the settings of the first heating circuit must be checked again and readjusted, if necessary.

Adjustment of flow volume:

1. Pull off the red cap.
2. Loosen the black adjusting nut (anti-clockwise).
3. Adjust calculated flow rate in L / min at the sight glass with the red actuation aid.
Clockwise = reduce flow volume. Anticlockwise = increase flow volume.
4. Press the black adjusting nut till it stops (clockwise).
5. Put the red cap on and push down.

CLOSING:

6. Turn with the red actuation aid to its stop (clockwise).

OPENING:

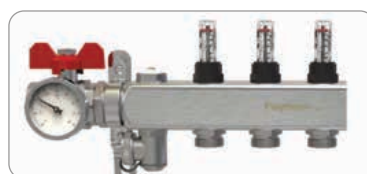
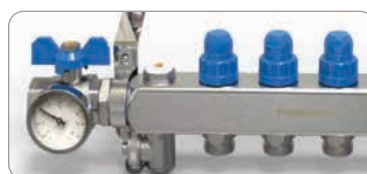
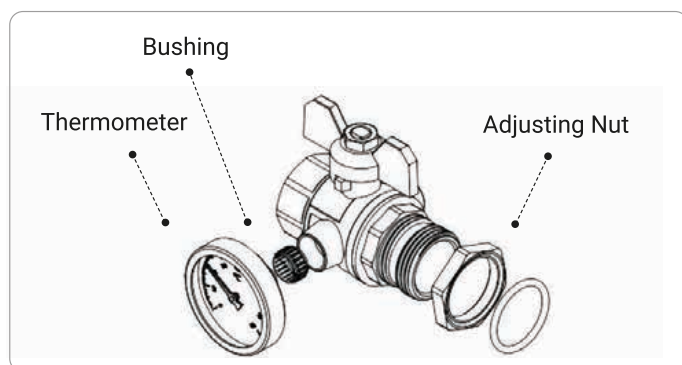
7. Turn with the red actuation aid to its stop (anti-clockwise) = open with default setting.

Accessories

1" Ball valves complete with temperature gauges (0-80°C)

U95990

Polytherm ball valves with built in temperature gauge, allows for ball valve adjustment after installation. Use the locking sleeve to create a perfect fit to prevent the thermometer from rotating. The internal thread of the ball is 1"



Supplied as a Red and Blue pair

Polytherm Edge Insulation Strip

U29610

The Edge Insulation Strip is a PE (Polyethylene) insulation, with a self-adhesive strip and overlapping foil, that is placed around the perimeter of the room when a wet UFH system is being installed. The self-adhesive strip allows for an easy fitting to walls and into corners and the overlapping foil prevents moisture and water from the screed reaching the floor insulation. The edge insulation strip joints must overlap by 5mm.

Thickness	Height (mm)	Length/Roll (m)
8	150mm	50mm



Standard: Building Material Class B2 according to DIN 4102. **Installation details:**

1. Remove the protective film from the adhesive strip on the back of the insulation.
2. With the Polytherm logo facing out, place the strip around the perimeter of each room.
3. Pull the film down over the floor insulation to form a seal between the edge insulation strip and the floor insulation.

Corrugated Sleeve U29608

Polytherm Corrugated Sleeve is used within a screeded UFH system to protect the UFH pipe where pipes are fed into the distribution manifold and where tails run over movement joints, door thresholds and through walls.

The sleeve can be cut with a pipe shears and slipped down over the UFH pipe, where needed.

Outer Diameter: approx. 25 mm
Inner Diameter: approx. 20 mm
Weight: approx. 63 g/m
Colour: Black
Material: Polyethylene
 Chemical resistance acc. to DIN 8075





Accessories

Expansion Joint Profile U35734

The Polytherm Expansion Joint is used at joints within the screed slab for example at internal doorways (door thresholds). The self-adhesive strip on the bottom of the profile provides a quick method to fix the joint to the insulation. For installation of the Polytherm Expansion Joint, first cut about 300mm of the corrugated sleeve and place over the UFH pipe. Cut holes in the Expansion Joint for the pipe and corrugated sleeve to fit through the profile.



Pipe Cutters U36152

The Polytherm Pipe cutters can be used to cut 16mm – 32mm pipe

- Two hand retraction movement of the premium hardened steel blade
- Cuts all commercially available plastic (PE, PP, PB, PEX, PVC) and compound pipes
- Light and robust design



Tacker Gun U19145

Tacker Gun is used for rapid stapling of E2 and E2Ls in to the insulation.

- Speeds installation
- Use while standing upright
- Suited for staples 40 or 60mm
- Loading staples is easy
- Durable construction (aluminium)



Pipe De-coiler UA6272

4-arm folding pipe de-coiler, predominantly for PEX-pipe-systems up to dimension 20mm pipe and coil length up to 600m, also usable with other kinds of pipes.

- Max. weight capacity:** approx. 100kg
- Max. inner-Ø:** approx. 620mm
- Max. coil height:** approx. 670mm
- Weight:** approx. 12.5kg
- Dimension height x width x length:** approx. 270mm x 145mm x 940mm (folded)



Accessories

Polycomfort Panel

One of the most successful underfloor heating systems that Polytherm has developed in its time, is the Polycomfort Panel System. This consists of overlapping floor panels which interlock to form a completely sealed surface before final screeding, resulting in negligible heat losses. Polycomfort is a floor heating system incorporating a level of comfort which sets standards from the planning stage right through to the smallest nooks and crannies of a room during installation.

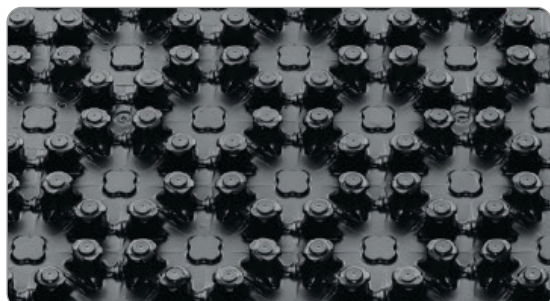


Polycomfort with Insulation

U20370

The Polycomfort System Panel (Combitop ND 11) meets the required acoustic and thermal insulation performances. A thermal conductivity resistance of $R_{\lambda} = 0.035 \text{ m}^2\text{K/W}$ is prescribed for the thermal insulation of the Polycomfort system. The Polycomfort Panel has 11mm rigid polystyrene foam (EPS) with added graphite for improved thermal conductivity at low installation heights.

The panel itself is approximately 1.12m^2 . It can accommodate $16 \times 2 \text{ mm}$ pipes and can be optimally adapted to any size and geometry of room and can be laid at either 150mm spacing or 200mm spacing. It is installed easily and cleanly using the overlapping press-stud principle.



Properties	Combitop ND 11
Board dimensions (length x width)	1,450 x 850 mm
Effective board size	1,400 x 800 mm
Effective board area	1.12 m ²
Laying grid (pipe spacing)	50 mm
Nominal insulation thickness dL	11 mm
Total thickness with pipe holder	31 mm
Pipe diameter	14 -17 mm
Compressive stress at 10% compression	150 kPa
Type of application per DIN 4108-10	DEO
Designation per EN 13163	EPS 150
Fire behaviour per EN 13501-1	E
Impact sound improvement	-
Stiffness group EN 13163	-
Thermal conductivity (normal value)	0.035 W/(mK)
Thermal resistance	0.30 m ² K/W
Heat distortion temperature	80 °C
Max. load	45 kPa (4,500 kg/m ²)
Flexural strength	250 kPa
Standard film colour	black
Quantity per box	13 boards = 14.56 m ²
Box size (L x W x H)	1,520 x 320 x 870 mm



HEATRACK

Unlike systems that require concrete pouring, HEATRACK Panels can be installed directly over the sub-floor. This method is known as a dry system. The system is made up of a number of different components.

Single HEATRACK Panels

U35728

This patented concrete-free under-floor heating system features 1.22m (48") long x 12mm thick panels backed with aluminium. So, they're not only neat and easy to install, they also reduce energy costs, compared to other under-floor heating systems.

Pre-Assembled HEATRACK Panels

U35729

The patented HEATRACK - pre-assembled system offers the same benefits as the single Panels - plus the added advantage of pre-assembling them for dramatically faster installation. Because they are pre-assembled and folded, pre-assembled panels are easy to handle and carry. To install, simply unfold the pre-assembled panels, interlock the sections, fasten to the subfloor, and walk in the Polytherm tubing.

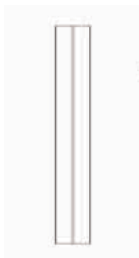
U-Turn HEATRACK Panels

U35730

These special U-Turn panels (filler strips) are part of the system to make installations neat and easy.

Silicone For HEATRACK

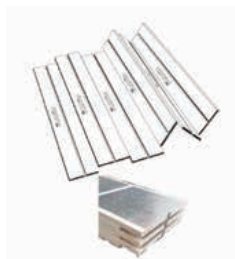
This specially designed heat transfer adhesive aids the heat transmission into the heated zone.



U35728

Single Panel
7500

Fixed aluminium plates
10 per pack
175 x 1215mm



U35729

Pre-Fab Panels
7501

Fixed aluminium plates
6 per pack
175 x 1215mm



U35730

U-Turn Panel
7502

Loose aluminium plates
10 per pack
175 x 1215mm

Our comprehensive range of thermostats offers different levels of control from a standard room thermostat controlling a single manifold all the way up to Wi-Fi enabled programmers allowing complete control of the temperature in each room in the house and offering remote access to your System whenever you need it.

Heating Controls Overview

Heat Merchants stock all leading brands of heating controls with options to suit every project and budget. We have categorised a range of controls to provide a simple overview but a variety of additional options and brands are also available.

BRONZE



Single room thermostat controlling each manifold through a motorised valve. This is a very cost effective option but offers a limited level of control.

SILVER



A non-programmable room thermostat in each room controls each zone through actuators mounted on the manifold. This allows for individual room control but has limited additional control.

GOLD



A digital touch-screen programmer provides greater control and allows you to set both time and temperature in each room. Set back function as standard.

PLATINUM



Programmer allowing time and temperature control in each room, set back function as standard. These units can also be controlled remotely via an APP (Internet Hub required)



Heating Controls

Heating Controls details are below. Additional information and data sheets are available from your local branch or online at www.heatmerchants.ie

BRONZE NON-Programmable Dial Thermostat

This basic non-programmable single thermostat will provide temperature control for each manifold. It is used in conjunction with a motorised valve.

Technical Specification

- Power supply / input 230Vac
- Power consumption Operating $\leq 1.5W$
- Temperature range 5 - 35°C
- Contact rating 3A 230Vac
- Dimensions 92 x 92 x 14mm
- LCD shows Actual and Heat On indication



SILVER NON-Programmable Room Dial Thermostat

PolyDIAL

The "PolyDIAL" series are the basic non programmable thermostat for boiler/valve or underfloor heating control.

Technical Specification

- Power supply / input 230Vac 50-60Hz
- Power consumption Operating $\leq 1.5W$
- Temperature range 5 - 35°C
- Ambient range 0 - 45°C
- Ambient admissible humidity 5-95% RH
- Contact rating 7A 230Vac
- Dimensions 85 x 85 x 36mm
- Temperature sensor NTC 100K
- Backlight white
- Switching differential adjustable from 0.0-1.0°C
- 0.1°C increments
- Automatic action 1°C



Heating Controls

GOLD Programmable Thermostat with Touch Screen

PolyTOUCH - U97234

This is a multi-function thermostat/timer for any part of your heating or hot water system where thermostatic or programmable control is required. The thermostat consists of two main modes: programmable or single channel time clock.

Technical Specification

- Power supply: 220VAC 10%, 50/60 Hz
- Temperature setting range: 5-35°C
- Temperature accuracy: $\pm 0.5^{\circ}\text{C}$
- Temperature control accuracy: $\pm 1^{\circ}\text{C}$
- Relay Rating: 5A
- Remote Sensor Type: NTC10K, B=3950
- Storage temperature: -20C~60°C
- Operating temperature: 0~50°C
- Max Humidity: 5~95%
- Backlight: white
- Floor probe ready
- Remote probe ready
- 35mm pattress box required



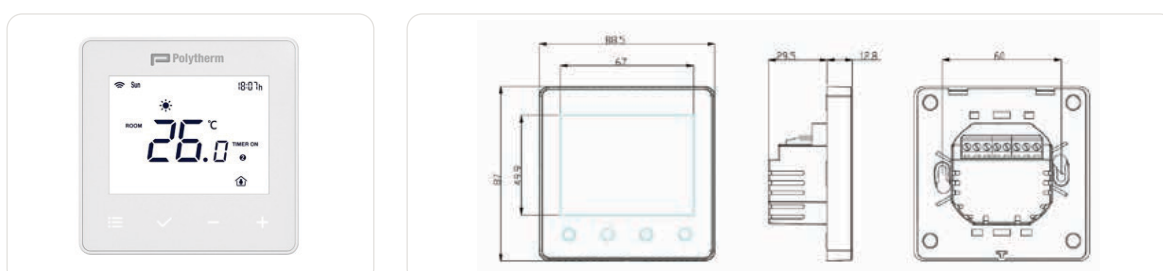
PLATINUM Programmable Thermostat with WIFI and App Control

PolyWIFI - U97235

The PolyWIFI series are the luxury touch-screen programmable thermostat for boiler/valve or underfloor heating control. App control is an option with the addition of the internet gateway, Polyzigbee.

Technical Specification

- Power supply: 85~230VAC, 50/60 Hz
- Temperature setting range: 5-35°C
- Temperature accuracy: $\pm 0.5^{\circ}\text{C}$
- Temperature control accuracy: $\pm 1^{\circ}\text{C}$
- Relay Rating: 3A
- Remote Sensor Type: NTC10K, B=3950
- Storage temperature: -20C~60°C
- Operating temperature: 0~50°C
- Max Humidity: 5~95%
- Backlight: white
- Floor probe ready
- Remote probe ready
- 35mm pattress box required





Components

Remote Air Probe / Floor Sensor

U61498

Floor sensor attached to a 3m cable for use with the thermostats to enable control over the maximum or minimum floor temperature.



Polytherm 230V Wiring Centre

U97238

PWB10 is a 10 Zone wiring centre for use with 230v thermostats, which can be used to control any actuator or valve which requires a 230v AC signal to open. At the same time the PWB10 offers the ability to operate a Heat pump or other heat source through a volt free output. Additional outputs designed for use with under-floor heating systems are also included as standard. These are the pump and valve outputs which would normally operate a pump or a valve.

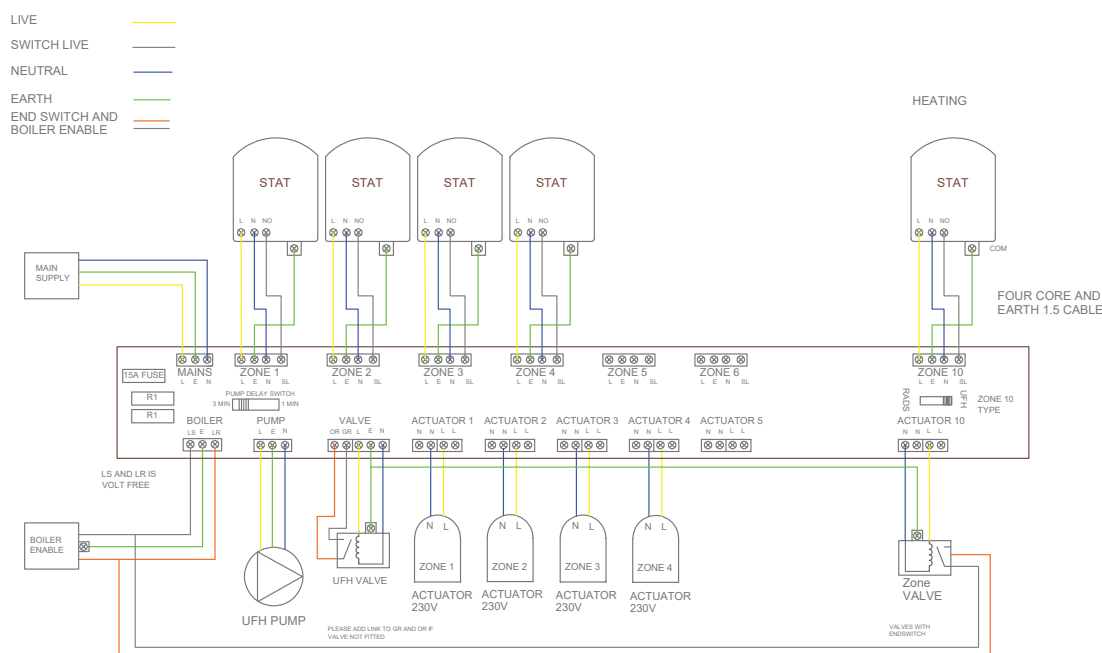


Dimensions: 32cm x 14cm x 5.5cm

Connections

Power supply into the WB10, which should be fused at 5amp, these connections are:

- Heat Enable
- This is the main call for heat for the system, there are 3 connections;
LS = Live Supply E = Earth LR = Live Return
- Electrically this is a volt free switch, whatever supply is placed on the LS connection, is fed to the LR connection when there is a call for heat.



This equipment should be installed by an appropriately qualified registered electrician.

Internet Gateway for Poly WIFI U97236

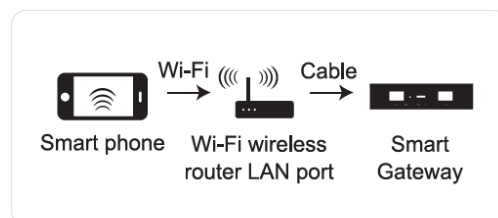
The PolyZIGBEE is a smart gateway to control your PolyWIFI stats through a device, like a mobile or tablet.

Download and open the App

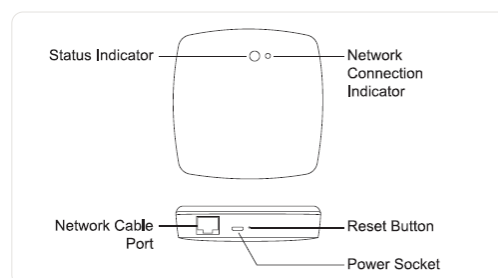
- Download the PolyConnect App or scan the QR code on the package
- If you are downloading the App for the first time you will need to register your account
- If you already have an account click the "Login" button
- Smart device must be connected to the same Wi-Fi network as the gateway

Network Setting

- Connect the gateway to the power supply and connect it to the home 2.4GHz band router through the cable, please connect power to the gateway first, if the power LED is on, then connect the network cable. Press the reset button for ten seconds and release, two LED are on, then go to the next step.
- Make sure that the mobile phone is connected to the home 2.4GHz band router. At this time, the mobile phone and the gateway are in the same local area network.
- Open the "My Home" page of the App and click the "+" button on the upper right corner of the screen.
- "Gateway" will appear on the "Gateway Control" page, click it for adding device.
- Then follow the App instruction to finish adding device.



- Battery Specifications; DC 5V 1A
- Operating Temperature: -10oC – 55°C
- Operating Humidity: 10%-90% RH



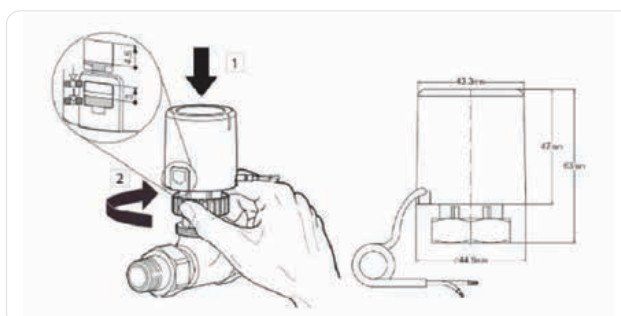
Polytherm Electric Actuator U18658

Thermal actuators are fitted onto the UFH manifold and provide for automatic control of individual heating loops. They have an open and closed indicator window and take between 2–4 minutes to completely open.

Technical Data

Polytherm Code	Power Supply	Normally	Running Time
U18658	230Vac	Closed (Open)	3.5 min

Max. Stroke	4.5mm
Ambient Temp. Range	0...50°C
Spring Pressure	125N





ORDER ONLINE
www.heatmerchants.ie

Heat Merchants

HAVE A QUERY?

Contact us on 090 6424000
enquiries@heatmerchants.ie

OUR LOCATIONS

Visit www.heatmerchants.ie for
contact details and branch locations



Bathroom Merchants

a **WOLSELEY** company

Bathroom Merchants provides trade customers with a complete bathroom and showering product range which is readily available through our network of Heat Merchants branches nationwide.

A wide range of stock is on hand for immediate collection or delivery from your local branch with the extended range available from our central warehouse for collection or delivery as soon as the day after you place your order.