Metro Rail System

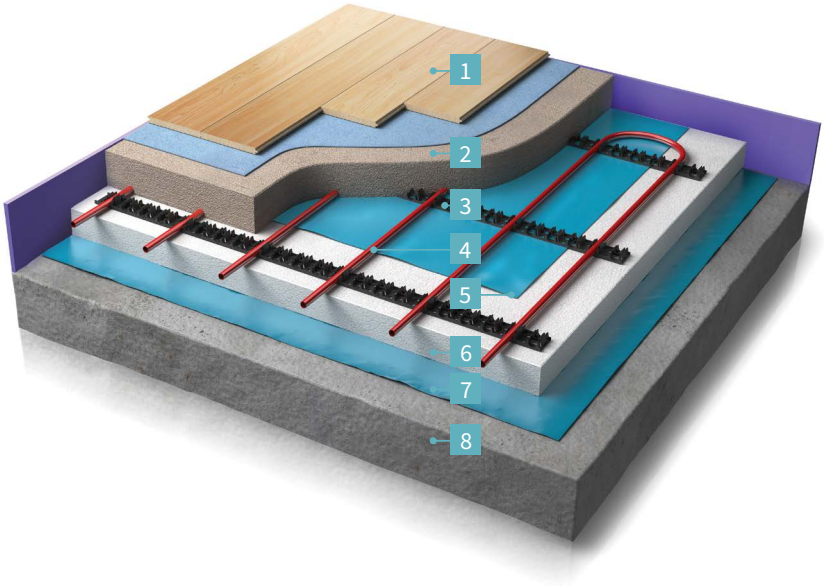
Overview

The Warmup Metro System is designed for use within either a floating or a bonded screed floor. The Metro Rail allows for quick, consistently spaced installation of the pipework prior to laying either a standard or a proprietary screed. The Metro Rails have integral clips spaced at 50mm intervals which provide a level of installation precision which is difficult to achieve with the Clypso System.

They offer a robust fixing mechanism that is resistant to disruption from site traffic ensuring that the finished system matches the design and performs as it should. For bonded screed floors they are simply laid over the primed pre-insulated subfloor before applying the screed.

The rails are laid perpendicular to the planned pipe direction, their backing is peeled off and they adhere to the floor, starting 200mm off the wall and then laid parallel at 1m intervals. The pipe is then clipped into place.

FLOOR CONSTRUCTION
1 Floor finish
2 65-75mm Sand & Cement Screed or propriatary screed
3 Warmup Metro Rail
4 Warmup 16mm Pipework
5 Moisture Control Layer
6 Rigid Insulation
7 DPM
8 Subfloor



Hydronic
Heating System

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www.warmup.co.uk

Warmup®
The world's **best-selling** floor heating brand™

Features

- Designed to ensure quick and easy installation - the rail provides guidance on how to install the pipework quickly and at the correct design spacing
- Holds the pipes at the correct level prior to screeding to ensure there are no hotspots
- The Metro Clip Rails have a self adhesive back for easy installation
- Various compressive strengths are available, which safely allows the floor build-up to take imposed loads without damaging the integrity of the floor
- Insulation available in a variety of thickness from 25mm - 100mm
- Lifetime Warranty when PEX-A pipe is used / 50yr Warranty for PE-RT or AL/PE-RT pipes

WARMUP COMPONENTS

Insulation Boards

Warmup supplies both Expanded Polystyrene (EPS) and foil faced Polyisocyanurate (PIR) insulation boards. The EPS boards provide excellent thermal performance with quick and easy install.

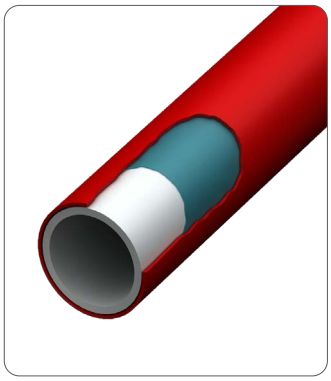
The PIR insulation boards have a tough woven aluminium foil composite grid on both sides. The foil face distributes the heat upward evenly. PIR insulation boards have a lower thermal conductivity making the boards much thinner than EPS insulation.

METRO PIR INSULATION BOARDS - TECHNICAL SPECIFICATIONS						
CODE	DIMENSIONS	THICKNESS	COMPRESSIVE STRENGTH @10% (kPa)	THERMAL CONDUCTIVITY @ 10°C	R-VALUE (m^2 K/W)	FIRE CLASS EN 13501
WHS-MT-INS25	2.4m x 1.2m	25mm	150	0.022	1.14	E
WHS-MT-INS30	2.4m x 1.2m	30mm	150	0.022	1.36	E
WHS-MT-INS35	2.4m x 1.2m	35mm	150	0.022	1.59	E
WHS-MT-INS40	2.4m x 1.2m	40mm	150	0.022	1.82	E
WHS-MT-INS45	2.4m x 1.2m	45mm	150	0.022	2.04	E
WHS-MT-INS50	2.4m x 1.2m	50mm	150	0.022	2.27	E
WHS-MT-INS60	2.4m x 1.2m	60mm	150	0.022	2.73	E
WHS-MT-INS65	2.4m x 1.2m	65mm	150	0.022	2.95	E
WHS-MT-INS70	2.4m x 1.2m	70mm	150	0.022	3.18	E
WHS-MT-INS75	2.4m x 1.2m	75mm	150	0.022	3.41	E
WHS-MT-INS80	2.4m x 1.2m	80mm	150	0.022	3.63	E
WHS-MT-INS90	2.4m x 1.2m	90mm	150	0.022	4.09	E

METRO EPS INSULATION BOARDS - TECHNICAL SPECIFICATIONS						
CODE	DIMENSIONS	THICKNESS	COMPRESSIVE STRENGTH @10% (kPa)	THERMAL CONDUCTIVITY @ 10°C	R-VALUE (m^2 K/W)	FIRE CLASS EN 13501
WHS-MT-B07025	2.4m x 1.2m	25mm	70	0.038	0.66	F
WHS-MT-B07050	2.4m x 1.2m	50mm	70	0.038	1.32	F
WHS-MT-B07075	2.4m x 1.2m	75mm	70	0.038	1.97	F
WHS-MT-B070100	2.4m x 1.2m	100mm	70	0.038	2.63	F
WHS-MT-B10025	2.4m x 1.2m	25mm	100	0.036	0.69	F
WHS-MT-B010050	2.4m x 1.2m	50mm	100	0.036	1.39	F
WHS-MT-B10075	2.4m x 1.2m	75mm	100	0.036	2.08	F
WHS-MT-B10100	2.4m x 1.2m	100mm	100	0.036	2.78	F
PREMIUM RANGE						
WHS-MT-B07025+	2.4m x 1.2m	25mm	70	0.030	0.83	E
WHS-MT-B07050+	2.4m x 1.2m	50mm	70	0.030	1.67	E
WHS-MT-B07075+	2.4m x 1.2m	75mm	70	0.030	2.5	E
WHS-MT-B070100+	2.4m x 1.2m	100mm	70	0.030	3.33	E
WHS-MT-B10025+	2.4m x 1.2m	25mm	100	0.030	0.83	E
WHS-MT-B010050+	2.4m x 1.2m	50mm	100	0.030	1.67	E
WHS-MT-B10075+	2.4m x 1.2m	75mm	100	0.030	2.5	E
WHS-MT-B10100+	2.4m x 1.2m	100mm	100	0.030	3.33	E

Warmup Insulation Boards have zero Ozone Depletion Potential (ODP) and a Global Warming Potential (GWP) of less than 5

Pipework



The Warmup PEX-A pipe is formed as a single extrusion with an adhesive layer and EVOH oxygen barrier. The EVOH layer restricts the ingress of oxygen into the heating system, reducing oxidation of critical components in the primary system and extending their service life.

The minimum 70% cross linking within the PE material provides superior mechanical properties to the pipe, with a maximum working temperature and pressure of 95°C and 6 bar respectively. The PEX-A pipe has a high thermal conductivity of 0.41W/mK, substantially greater than an equivalent polybutylene pipe at 0.22W/mK. This enables our systems to emit between 3% and 6% more heat from the same water temperature as equivalent systems using PB pipe.

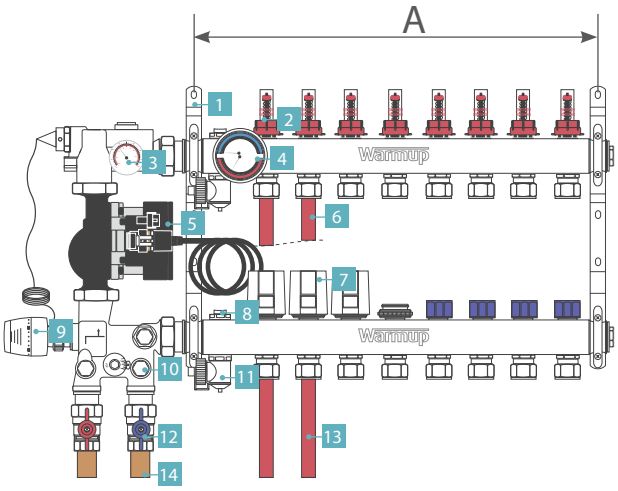
PEX-A PIPE - TECHNICAL SPECIFICATIONS						
CODE	DIMENSIONS	MAX. WORKING TEMPERATURE	MAX. OPERATING PRESSURE	COMPOSITION	THERMAL CONDUCTIVITY	WATER CAPACITY
WHS-P-PEXA-25	PEX-A 16mm x 2mm x 25m	95°C	6 Bar	PEX-A 70% cross linked	0.41 W/mK	16mm pipe - 0.113 l/m
WHS-P-PEXA-50	PEX-A 16mm x 2mm x 50m					
WHS-P-PEXA-60	PEX-A 16mm x 2mm x 60m					
WHS-P-PEXA-70	PEX-A 16mm x 2mm x 70m					
WHS-P-PEXA-80	PEX-A 16mm x 2mm x 80m					
WHS-P-PEXA-90	PEX-A 16mm x 2mm x 90m					
WHS-P-PEXA-100	PEX-A 16mm x 2mm x 100m					
WHS-P-PEXA-110	PEX-A 16mm x 2mm x 110m					
WHS-P-PEXA-120	PEX-A 16mm x 2mm x 120m					
WHS-P-PEXA-200	PEX-A 16mm x 2mm x 200m					
WHS-P-PEXA-300	PEX-A 16mm x 2mm x 300m					
WHS-P-PEXA-500	PEX-A 16mm x 2mm x 500m					

NOTE: Range of PE-RT & PE-RT/AL/PE-RT pipes also available. Please contact Warmup on 0845 034 8270 for further information

Manifold

The Warmup Stainless Steel Manifold range provides flexible zoning and water regulation for 2 to 12 underfloor heating circuits. Supplied complete with Taconova TopMeters, Fill/Drain Valves, Air Vents and a Thermomanometer, it is equipped with all the features needed to commission an underfloor heating system quickly and confidently.

MANIFOLD - TECHNICAL SPECIFICATIONS	
MATERIAL	304 Stainless Steel
PORTS AVAILABLE	2 - 12
TEMPERATURE RANGE	-5°C to +60°C
MAX OPERATING PRESSURE	6 Bar
MAX TEST PRESSURE	10 Bar
ADJUSTMENT RANGE	0 - 5 l/min
MEASURING ACCURACY	±10% (of highest nominal value)
MANIFOLD ARM DIMENSIONS	40 mm X 40 mm
PIPE FITTING CENTRES	50 mm / 55 mm
PIPE FITTING DIAMETERS	G-1/2" (20X1.5)



MANIFOLD & MIXING UNIT

1 Mounting Bracket
2 Flow Gauge
3 Thermometer - secondary
4 Thermomanometer
5 Grundfos UPM3 Circulator
6 Secondary - Flow
7 Electrothermic Actuator
8 Manual Air Vent
9 Capillary Thermostat
10 Mixing Unit
11 Fill/Drain Valve
12 Primary Isolation Valve
13 Secondary - Return
14 Primary pipework

Thermostat

6iE WIFI THERMOSTAT

For Central Heating and Underfloor Heating Systems

The world's first UFH thermostat with a smartphone touchscreen providing effortless control at your fingertips. Connected to the internet by WiFi, it can be controlled from a smart phone, tablet or computer as well as its own touchscreen interface. Working automatically; it learns your routines and location through background communication with your smartphone. Using this knowledge it suggests ways to save energy.

Personalise your 6iE with uploadable photo backgrounds.

SmartGeo™

Always at the right temperature automatically, and up to 25% lower energy usage. Just like magic.

EasySwitch™

Always on the best tariff, automatically. Saving on average £210.

Easy to use

Simple and secure set up using WiFi, with 24/7 technical support.