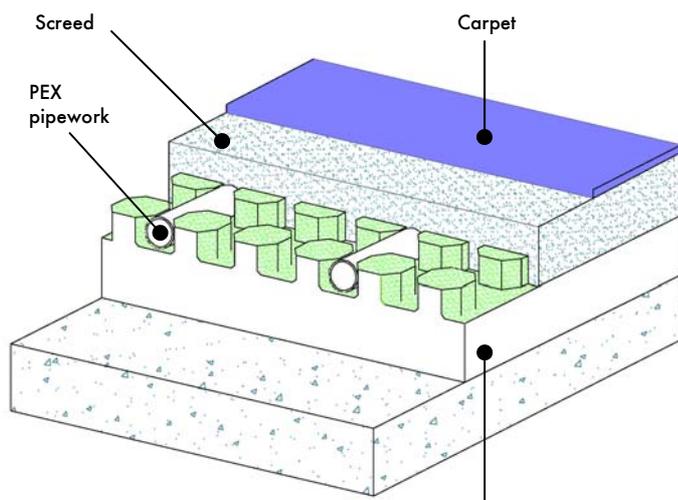


Isowarm – Castelboard System



System Design



Isowarm castellated polystyrene insulation board

Description

Isowarm Castelboard system is a complete underfloor heating system incorporating insulation, pipework and associated retaining system and screed.

Uses & Applications

Efficient heating of many types of building including most commercial and residential applications e.g. schools, hospitals, prisons, airports, shopping centres, offices, hotels, theatres, apartments and houses. The system can be used in cooling mode with chilled water instead to reduce the dependence on all-air conditioning systems. The system can also incorporate acoustic insulation.

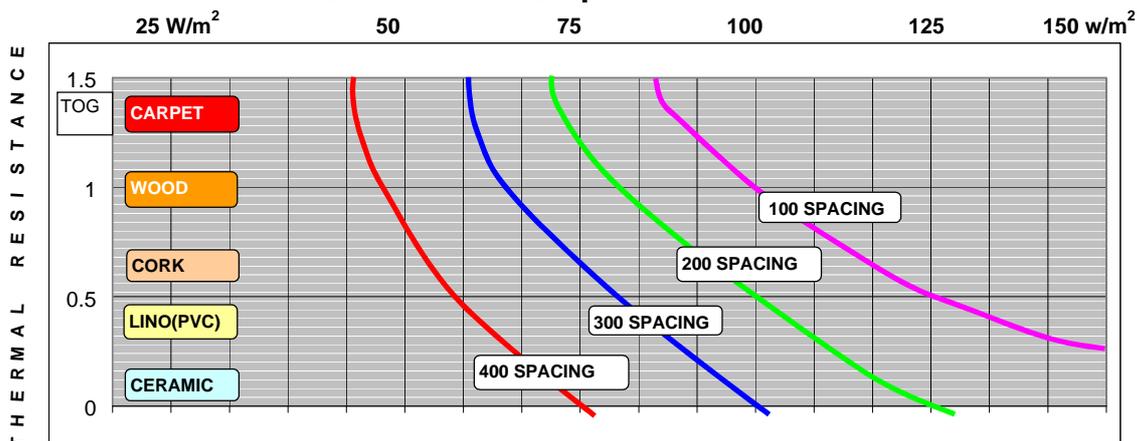
Benefits

- Robust design, yet simple and quick to install
- Clever pipe retention system – precision location of pipes which will not slip or float in screed. May also be walked upon before screed laying with minimal risk of damage to pipes or insulation
- Vapour-resistant membrane, factory applied polyethylene film applied to insulation surface, does not leak
- No joints in pipes
- Energy cost savings of up to 24% against conventional radiator based systems (BSRIA studies)
- Maintenance free for the lifetime of the building
- Uniform air temperature within occupied zone
- Complete flexibility of room layout (no radiators to accommodate)
- Complete installation by one contractor to include all system elements, insulation, membrane, edge isolation, joints, pipework, manifolds, cabinets, actuators, room thermostats and floor screeds
- Overall system thickness can be as little as 70 mm
- Flexibility of zone temperature control, from whole building to individual rooms
- Product and design guarantee for complete system

Project References

Ashfield Healthcare;
 Aurora Hotel, Gatwick;
 Brooklands-Weybridge Heating/Cooling (offices);
 Redditch College (Education);
 Brentford Lock (Apartments);
 Royal Mid-Surrey Golf Club (Leisure);
 The Green Building, Manchester (Apartments);
 Broadmoor Hospital.

Surface Heat Output = Watts/m² Guidance Only



Note: 1 Tog (Textile unit) = 0.10 m²K/W scientific unit.

Basis: 45 °C Water to 25 °C Air

Model Specifications

Product: Isowarm Castelboard
 Preparatory work and application in accordance with manufacturer's instructions.
 Manufacturer: Flowcrete UK Ltd

Isowarm Castelboard underfloor heating system to include 52 mm thickness Isowarm castellated polystyrene insulation board grade HD-N (or 38mm thickness grade EHD-N). Isowarm 16 mm diameter cross-linked polyethylene (PEX) pipework, minimum 50 mm anhydrite screed and all associated Isowarm manifolds, cabinets, thermostats, edge separation and joints, all in accordance with the design produced by Isowarm.

Installation Service

The installation should be carried out by an Isowarm licensee with a documented quality assurance scheme. Obtain details of our approved contractors by contacting our customer service team or enquiring via our website www.flowcrete.co.uk.

Environmental considerations

The complete system is assessed as non-hazardous to health and the environment. All products have been chosen to permit future recycling or re-use at the end of useful life. The absence of radiators or bulky heat emitters provides a more aesthetically acceptable environment with minimal impact.

Focus on the Floorzone

Flowcrete Group plc are world leaders in specialist industrial and commercial flooring. Systems available include: underfloor heating systems, floor screeds, surface damp proof membranes, decorative floor finishes, seamless terrazzo, car park deck waterproofing, corrosion resistant systems... to name just a few.

Our objective is to satisfy your Floorzone needs.

Typical Details

Thickness insulation (HD) 52 mm *
 Thickness insulation (EHD) 38 mm *

Screed type	Minimum covering over pipes	Screed thickness overall
Anhydrite	30 mm	50 mm (min)
Isocrete K-Screed	35 mm	65 – 75 mm

Pipe diameter (OD) 16 mm
 Acoustic insulation Optional
 Water temp flow (± 5 °C) 35 to 50 °C
 Water temp return (± 5 °C) 25 to 40 °C
 Typical maximum surface working temp 29 °C
 Normal max heat output (at 20 °C) 100 W/m²

Avoid abrupt changes in thickness which can lead to formation of screed cracks.

* Board thicknesses are:

(HD) 35mm plus castellation system.
 (EHD) 20mm plus castellation system.

Important Notes

Flowcrete's products are guaranteed against defective materials and manufacture and are sold subject to its standard Terms and Conditions of Sale, copies of which can be obtained on request.

Any suggested practices or installation specifications for the composite floor or wall system (as opposed to individual product performance specifications) included in this communication (or any other) from Flowcrete UK Ltd constitute potential options only and do not constitute nor replace professional advice in such regard. Flowcrete UK Ltd recommends any customer seek independent advice from a qualified consultant prior to reaching any decision on design, installation or otherwise.