

CATEDRAL SANTO DOMINGO - SPAIN

Case Study

Warmup

Britain's **Best-selling** system™

Quick Facts:

Location:

Santo Domingo de la Calzada, La Rioja, Spain

Client:

Catedral Santo Domingo de la Calzada

Nature of Project:

Public

About the client:

Built in 1098, the Catedral Santo Domingo de la Calzada is a Spanish National Heritage monument.

System specifications:

- 200W/m² heating mats
- Foil heaters
- 2cm thick insulation boards
- Warmup® XSTAT thermostats

Warmup is the only underfloor heating accredited by all these leading institutions:



Warmup selected for restoration of 900m²-large Spanish National Heritage treasure



The Challenge

As part of its refurbishment, the cathedral will have new stone floors installed. With high ceilings and a massive area of 900m² to heat on a part-time basis, a responsive heating system had to be put in place.

The Solution

Taking into consideration the high ceilings and potential heat loss, Warmup quoted the 200W/m² Warmup® undertile heating mats, which enabled an extremely quick response time. The heaters were then laid onto 2cm thick extruded polystyrene insulation boards to further improve thermal efficiency. For the laminate platform, the Warmup® Foil Heaters were chosen. Finally Warmup® XSTAT thermostats were used for precise zonal operation.

The Result

Worshippers can now enjoy their congregations in the warmth radiated from the new stone floors.



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System Specifications

Products Used



PFM matting system (PFM)

Warmup® mat systems are perfect for heating up a large or regular-shaped room. Just 2mm thin, this multi-strand core, double-insulated element is the toughest and thinnest wire you can buy. Installation is as quick and simple as rolling out the mat with pre-spaced wires. Sturdy fibreglass mesh gives it extra durability while super-sticky double-sided tape allows secure installation.

Technical data:

- Operating voltage 230V: 50Hz
- Width: 500mm (0.5 metre)
- Mat thickness: 3mm
- Inner/Outer Insulation: Advanced Fluoropolymer
- Output rating: 100W/m², 150 W/m² and 200 W/m²
- Single 3m long 'cold tail' connection lead
- Approvals: ASTA BEAB, CE, KEMA & GS
- Lifetime Warranty & SafetyNet™ Installation Guarantee



Foil Heaters (WLFH)

The Warmup® Foil Heater is a streamlined electric radiant floor heating system designed for use with laminate, engineered wood and other floating floors. It can be conveniently installed under the floor finish in both dry and wet areas without the need for additional earth grids. The reflective properties of the reinforced aluminium foil used in the heater help conserve heating energy.

Technical data:

- Construction: ECTFE wire encased in aluminium foil
- Operating voltage: 230V: 50Hz
- Output rating: 140W/m²
- Mat Width: 0.5m
- Mat Length: min 3m, max 20m
- Heating Cable Spacing: 50mm
- Cold Lead Length: 3m
- Approvals: CE, SEMKO
- 15-Year Warranty & SafetyNet™ Installation Guarantee



WARMUP® Insulation Boards

Using Warmup® insulation boards with underfloor heating can lower your running costs by as much as 50% while reducing your carbon footprint. In fact, they can pay for themselves in as little as 2 and a half years.

Technical data:

- Board Dimensions: 1250mm x 600mm
- Board Thicknesses: 6mm, 10mm (standard), 20mm, 50mm
- Able to withstand a load of 30 tonnes per square metre
- U Values (W/m K): 6mm-4.50, 10mm-2.70, 20mm 1.35, 50mm-0.54
- Water Absorption (Capillary): Nil
- Class "O" / "B1" fire rated
- High soundproofing properties
- No primer required when used in conjunction with underfloor heating



Warmup® XSTAT programmable thermostat

Warmup® XSTAT is a flush mounted, dual-sensor digital thermostat so easy to program that there is hardly any need to read the instruction booklet!

Technical data:

- Supply voltage: 230V: 50Hz
- Output relay SPST or 1A inductive load: 16A, 3,600W
- Built-in interrupter: 2-pole, 16A
- Temperature range: 0 / +40 °C
- Limitation of range: +5 / +55 °C
- Ambient temperature during operation: 0/+40°C
- On/off differential: 0.4°C
- Sensor type: NTC, 3 m
- Dimensions (H/W/D): 86 x 86 x 34 mm
- XSTAT Clock function: 4-events program/7 days
- XSTAT Housing: IP 20
- XSTAT Size of display (H/W): 26 x 39 mm
- XSTAT Installation depth: 14mm
- Approvals: CE, ASTA BEAB
- Available in white and graphite

Product Application

