

NBS Category:

Underfloor heating and cooling systems

NBS Manufacturer:

DEVI™ by Danfoss

NBS Sub Category:

Electric underfloor heating systems

Application

Electric underfloor heating for comfort heating, total or direct heating and accumulating heating. Full details can be found in the DEVI application manual for indoor cable underfloor heating systems.

Description

A complete range of intelligent electric underfloor heating solutions including:

- Thin self-adhesive heating mats
- Heating cables
- Control thermostats

Low profile heating mats are designed for installation in the tile adhesive layer or self-levelling mixture. Each mat consist of a thin heating cable on a self-adhesive glass fibre mesh, specifically designed to stick firmly to the sub floor and ensure a problem free application of tile adhesive. The heating mats are supplied with twin conductors (to ensure negligible electro-magnetic fields) and are ready made in specific sizes (0.5, 1, 1.5 ... 12m²) with a pre-terminated power supply cable, available in various heat outputs (70-200W/m²) and with continuous full screening throughout.

Robust, twin conductor cables are supplied for embedding in concrete. Available in fixed lengths (7-410m), with pre-terminated power cables, in various heat outputs (6-20 W/m) and with continuous full screening throughout.

Heating mats are also available for embedding in concrete, supplied with twin conductors and made ready to install in specific sizes (1.1-15.6m²) and a range of heat outputs (100-175W/m²).

The control thermostat range includes basic units to intuitive programmable timer options, providing regulation of:

- Air/room temperature with limitation of floor temperature, using dual sensors
- Floor temperature, using single sensor
- Air temperature

Intelligent timer thermostats provide the very latest in control technology, including Wi-Fi for multiuser app interface and offer programmable, zoned heating control.

The heating cables, mats and control units are all covered by an Environmental Product Declaration (EPD) to transparently report and document the environmental impact, based on a product life-cycle assessment (LCA). All are CE marked, certified according to relevant IEC (EN) codes and comply with the latest wiring regulations and Part L of the Building Regulations

Underfloor heating mats:

- DEVI[™]mat 70/100/150/200T
- DEVI[™]comfort 100/150T

All mats are covered by an EPD, the low-profile mats comply with IEC EN 60335-1 and IEC EN 60335-2-96, the concrete embedded mats comply with IEC EN 60800-2009

Underfloor heating cables:

- DEVIflex™ 6/10/18T
- DEVIcomfort™ 10T

All cables are covered by an EPD comply with IEC EN 60800:2009 class M2.

Underfloor heating controls:

- DEVIreg™ Smart
- DEVIreg™ Touch
- DEVIreg™ Room

All thermostat controls are covered by an EPD comply with IEC EN 60730-1; 60730-2-9 (thermostat); 300 328 (WiFi)

Design:

The manufacturer or operations partner shall be able to provide heat loss calculations and the corresponding design of the underfloor heating system, electrical schedules and circuit breaker protection, operating currents and loads, system layout and schematic drawings indicating power connections; controller configuration list and wiring diagrams.

Installation:

All underfloor heating systems shall be installed, tested and commissioned in strict accordance with the design plans and the DEVI application manual for underfloor heating systems. Installation shall be closely coordinated with the responsible sub-contractors.

Electrical connection:

All connections between the electrical supply, control panel and underfloor heating circuits by an approved electrical contractor. Circuit breaker protection MCB (BS EN 60898 type C) and RCD (30 mA sensitivity, tripping within 100ms).

General Information

Warranty Description

Manufacturers Guidance

Warranty of 20 years on constant wattage heating cables and mats, 2 years on all controllers

Uniclass

CAWS

Specification data – Underfloor heating mats and cables

Application

Electric underfloor heating

Underfloor heating mats:

DEVI[™]mat 70/100/150/200T

Guidance for specification option:

Low profile, self-adhesive mats for trouble free installation in the tile adhesive layer.

70/m²; fixed sizes: 3.0-11.7m², 0.5m width; cold lead 4m
100/150W/m²; fixed sizes: 0.5-12m², 0.5m width; cold lead 4m
200W/m²; fixed sizes: 0.45-10.5m², 0.5m width; cold lead 4m

DEVlcomfort™ 100/150T

Guidance for specification option:

Low profile, self-adhesive mats for trouble free installation in the tile adhesive layer.

100W/m²; fixed sizes: 0.5-12m², 0.5m width; cold lead 2.3m

150W/m²; fixed sizes: 1.0-12m², 0.5m width; cold lead 2.3m

DTCE 100/150/175T

Guidance for specification option:

For installations where the heating mats are to be embedded in concrete.

100W/m²; fixed sizes: 2.25-12m², 0.75m width; cold lead 6m

150W/m²; fixed sizes: 2.0-11.9m², 0.75m width; cold lead 6m

175W/m²; fixed sizes: 1.1-15.6m², 0.75m width; cold lead 6m

Underfloor heating cables:

DEVlflex™ 6/10/18T

Guidance for specification option:

6W/m; fixed lengths 30-200m; cold lead 2.3m

10W/m; fixed lengths 2-210m; cold lead 2.3m

18W/m; fixed lengths 7.3-170m; cold lead 2.3m

DEVlcomfort™ 10T

Guidance for specification option:

10W/m; fixed lengths 10-170m; cold lead 4m.

Underfloor heating controls:

DEVlreg™ Smart

Guidance for specification option:

A programmable timer thermostat designed to have WiFi connectivity, with capability to be paired with up to ten mobile devices and communicate with two mobiles simultaneously and be remotely controllable all through the multi user DEVlsmart™ App. The App has the capability to control up to 100 thermostats, with the possibility of ten Apps connected to a single thermostat and two Apps simultaneously controlling a single thermostat at the same time. The thermostat is capable of precise room temperature control using adaptive pulse width modulation (PWM) regulation and has 7/30 day / lifetime energy consumption readouts. The thermostat has intuitive touchscreen operation and includes an App wizard to enable fast set up. The unit mounts into a standard wall box and has a special two part construction to fit a wide range of frames and sensors. It is dual sensor operated and available in four colours.

DEVlreg™ Touch

Guidance for specification option:

A programmable timer thermostat with large touch screen display, built in set up wizard, adaptive pulse width modulation (PWM) regulation and an energy saving program. Flush mounts into standard wall box. It fits a wide range of frames and sensors due to its special two-part construction. Dual sensor operation. Available in four colours.

DEVlreg™ Room

Guidance for specification option:

An electronic thermostat with a programmable timer, designed to fulfil the Eco Design Directive, it is fast to set up using buttons below the screen. It has pulse width modulation (PWM) regulation, open window detection and an energy saving program. Flush mounts into standard wall box. It has an integrated frame. Dual sensor operation.

BIM objects

Platform	Compatible	Version
Revit	Revit 2017	1

[Download BIM](#)

Similar products from DEVI™ by Danfoss

DEVipeeguard™ 10/25/33

DEVliceguard™ 20/30T

DEVhotwatt™

DEVIsnow™ 20/30T

DEVIsnow™ 300T

DEVlasphalt™