

DEVI  TM
Member of the Danfoss Group

electric underfloor heating solutions

www.devi.co.uk

DEVI is Europe's leading electric underfloor heating manufacturer and the preferred partner of many of the UK's leading housebuilders and developers, with sales companies in thirty countries worldwide.

Established for over forty years, DEVI has designed and installed underfloor heating in the UK, in projects ranging from large apartment developments, to single house applications. Working closely with developers and architects, as well as builders and electricians, DEVI has demonstrated commitment to providing unrivalled project support from design through to installation and after-sales care.

In January 2003, DEVI became a member of the Danfoss Group, the world's leading manufacturer of heating, cooling and air conditioning products. With over 18,000 employees, the Danfoss group has 59 factories in 21 countries.

DEVI products are manufactured in two ISO9001 compliant factories in Vejle, Denmark which also houses our IT, Marketing and R&D departments.

quality

Electric underfloor heating

Your benefits

Invisible comfort

A comfortable, efficient and economical alternative to conventional heating. DEVI systems are also invisible, providing total freedom when decorating and furnishing.

Heat rises

Underfloor heating radiates heat evenly across the whole floor area, providing maximum comfort levels; warm feet and cooler at head height, whereas traditional systems provide heat by convection; the hot air rises and leaves a mass of warm air at ceiling level, where it cools and returns as a draught.

Economical

Typically, electric underfloor heating makes it possible to lower the average room temperature by 2°C without affecting the level of comfort. This means that heating can be reduced by around 20%, which is both an economic and an environmental advantage.

Capital cost savings

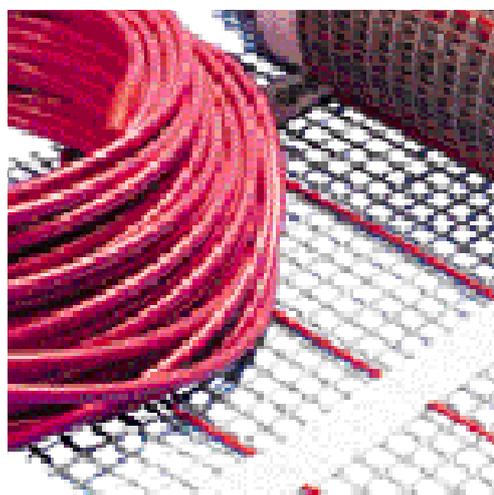
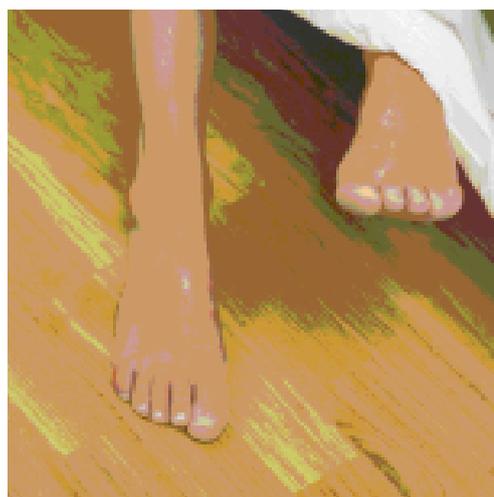
Once installed, there are no future maintenance costs or contracts to consider. There is also no need to channel emissions out of the building, which greatly simplifies the design process.

Health benefits

With electric underfloor heating, there are no travelling dust particles and no moisture content to support dust mites, which greatly benefits those who suffer from dust allergies and asthma.

Total floor solutions

DEVI strives to ensure that the installation process is as efficient as possible. Working closely with other organisations, we are able to offer a total solution for your project, encompassing the work of three trades; insulation, heating installation and screed. As well as providing one point of responsibility, this also means that the build programme can be streamlined in order to achieve the highest levels of efficiency. As an example; for a large project, in a typical week DEVI would prepare the floor on a Monday and Tuesday, install the heating cables on Wednesday and Thursday and screed on a Friday.



Product range

Cable systems



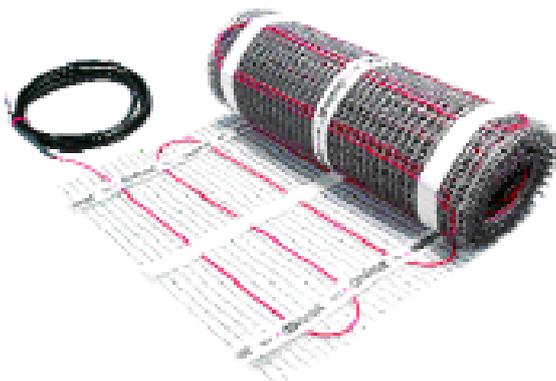
deviflex heating cables

- DSIG - single conductor cable, two cold tails with screen.
- DTIP - twin conductor cable, one cold tail with screen.
- Cables can be cast within a screeded floor or installed between timber joists.
- Cable type will be specified according to floor construction.
- Applications - total underfloor heating solutions for new builds, ice and snow melting, frost protection.



devicell dry insulation plates

- Provides the perfect solution for quick and easy installation of deviflex cables under wooden floors - no screed or additional preparation required.
- Consists of a 12mm polystyrene plate covered with a 1mm aluminium plate.
- The combination of an insulating sub-floor and a heat-conducting surface ensures optimum heat reflection upwards.
- A relatively low amount of power is required to provide the desired temperature.
- Applications - total underfloor heating solutions beneath wooden floors.



devimat

- Provides warm, comfortable floors
 - A self-adhesive mesh with ultra-thin heating cable pre-attached.
 - Twin conductor heating cable; no second tail to return to the thermostat, saving installation time and cost.
 - Can be installed within the thickness of the tile adhesive, which is ideal where floor height is a consideration.
 - Can be installed on top of the existing floor, or onto wood (100W/m²) or concrete (150Wm²).
- Typical applications - kitchens and bathrooms.

Thermostats - individual room control



devireg 550

- Combined 7-day thermostat and timer, can be set to monitor floor temperature, room temperature or a combination of the two.
- Intelligent pre-heat function enables the controller to calculate exactly what time the system should be switched on to achieve the required temperature, set by the user.
- Continually learns from its environment and automatically adjusts heating to meet comfort levels regardless of changing weather conditions.
- This accurate control ensures an exceptionally high level of energy efficiency and minimal running costs.



devireg 535

- Combined 7-day thermostat and timer; can be set to monitor floor temperature, room temperature or a combination of the two.
- Can be locked to both minimum and maximum temperatures; well-suited to wooden floor applications.
- Lowest standby consumption on the market, max 0.30W.
- Additional feature - child lock safety function.



devireg 130

- Basic surface mounted thermostat, well-suited to floor warming applications.
- Uses a floor sensor to monitor the floor temperature, but with no timer.
- The single dial on the 130 is used to control the temperature of the floor and also switch the system off.

For technical specifications, please see page 8.

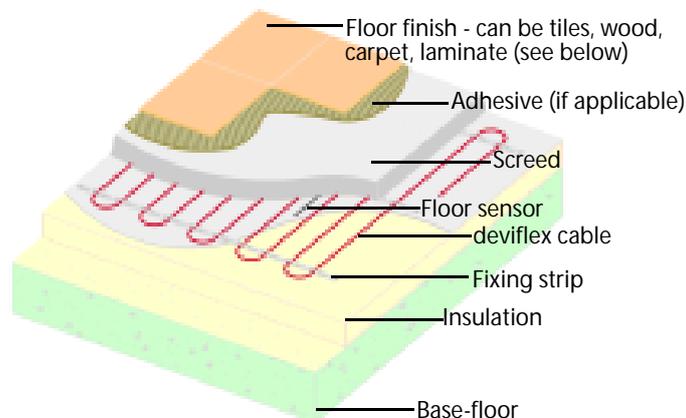
Floor constructions

Loose-laid cable systems

deviflex installed onto concrete floors

deviflex can be installed into floors utilising both on or off-peak tariffs. The system can be used as a direct acting system using on-peak electricity tariffs, available 24 hours a day and utilising electricity directly when you need it. Alternatively, DEVI's off-peak heating system is designed to utilise electricity during low tariff periods.

Here, the cables are attached to either a foil-faced insulation, sound resilient layer or polythene. A screed is then applied. If required, DEVI can work to Robust Standard Detail floor constructions.

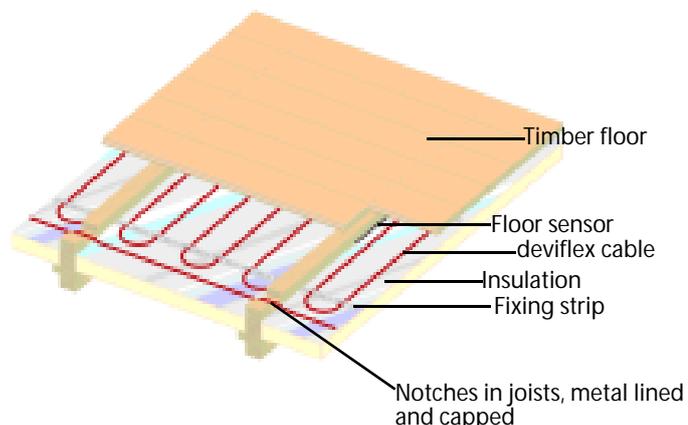


deviflex installed within wooden floors

DEVI systems can be installed in all types of wooden floor constructions and beneath wooden floorcoverings.

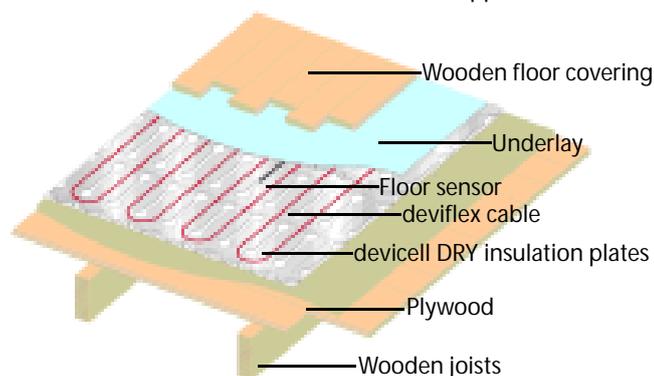
The precise control ensures that the temperature in the floor construction always corresponds to the tolerance level that the manufacturer of the floor surface has recommended.

This floor construction shows cables installed in between timber joists. The insulation is laid between the joists and then the heating cables are fixed to the insulation. The joists are notched or left short of the wall to allow the cables to pass from one joist to another.



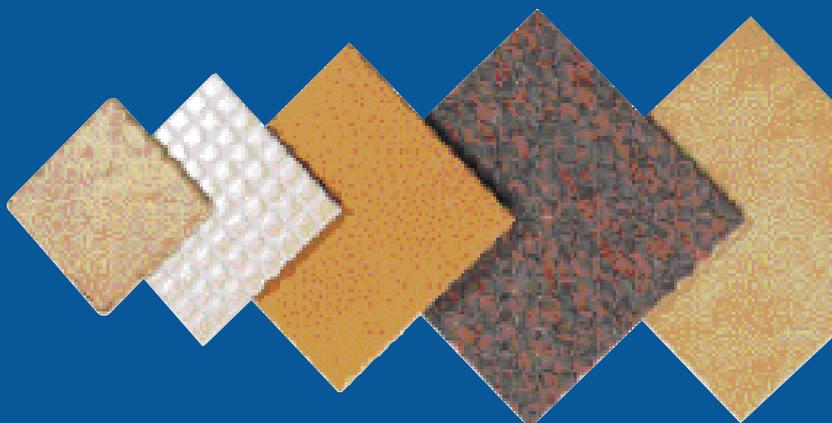
devicell *DRY* insulation plates

devicell *DRY* insulation plates are ideal for quick and simple installation of underfloor heating beneath wooden floors. devicell can be laid onto both concrete and timber floor. In this case, the devicell plates are covered by an acoustic underlay and then the chosen floor covering.



Floor surfaces

DEVI underfloor heating systems are suitable for use with most types of floorcovering, including wood, laminate, ceramic tiles, natural stone and vinyl. The cable systems are also suitable for areas that are carpeted.



Matting systems

devimat installed onto concrete floors

The devimat system is a floor warming system used in conjunction with a primary heat source. In some applications, the output of the system is able to provide comfort temperatures depending on the heat loss of the building.

In this floor construction (opposite) the mat is installed onto either a new screeded floor or an existing sub-floor, then the tile adhesive and floorcovering applied.

Heating output - devimat 150 W/m² suitable for installation onto concrete floors.

devimat installed onto timber floors

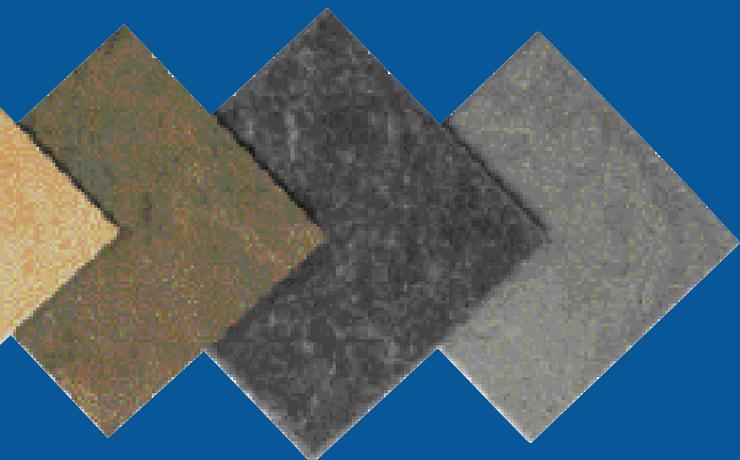
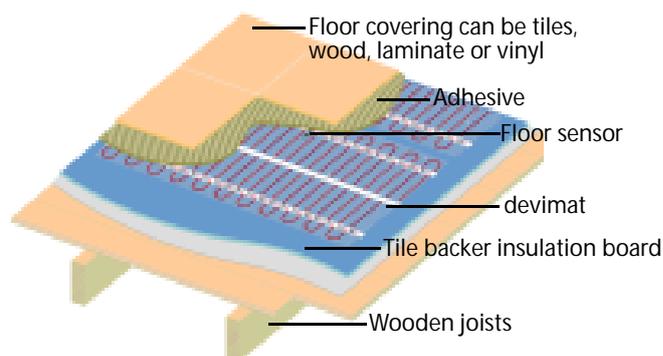
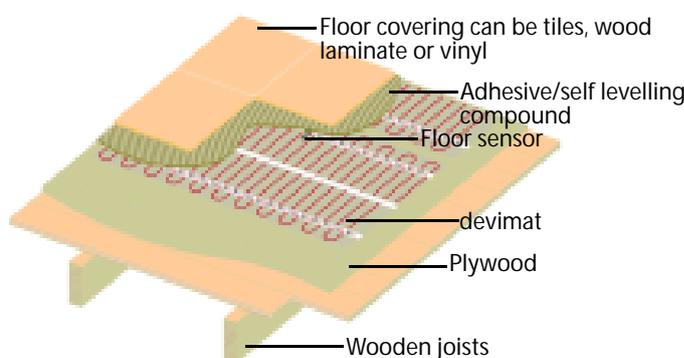
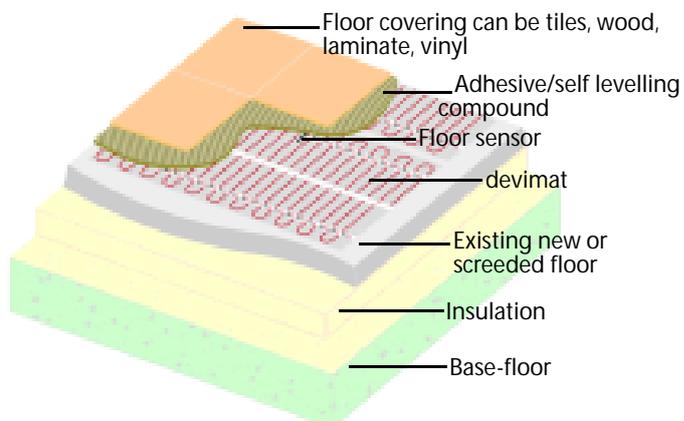
devimat can also be installed directly onto a suitably rigid timber floor construction. The adhesives and floor coverings are then laid as normal.

Heating output - devimat 100 W/m² suitable for installation onto timber floors.

devimat onto tile backer board

If the devimat is installed onto a tile-backer insulation board, onto timber floors, a higher output can be installed.

Heating output - devimat 100/150 W/m², suitable for installation onto a tile backer board.



- The supplier of the floor surface should always be consulted with regard to the adhesives that are used.
- The floor manufacturers instructions on maximum temperatures should always be followed.
- If the floor surface consists of wood or plastic, the cables must be covered with a suitable screed thickness, according to British Standards BS8204.

Total floor solutions

Design

DEVI is committed to providing unrivalled project support, designing specific underfloor heating systems to match your application and floor construction. DEVI manages the project from design through to supply and installation and also provides complete after-sales care and technical guidance. Designers at DEVI work with Auto-CAD to provide the relevant working drawings.

DEVI strives to ensure that the installation process is as efficient as possible, working closely with other organisations to offer a total floor solution for projects; insulation, heating installation and screed.

As well as providing one point of responsibility, this means that the build programme can be streamlined in order to achieve a high level of efficiency.

Insulate

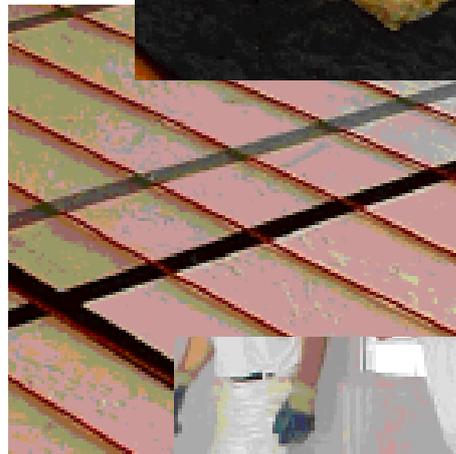
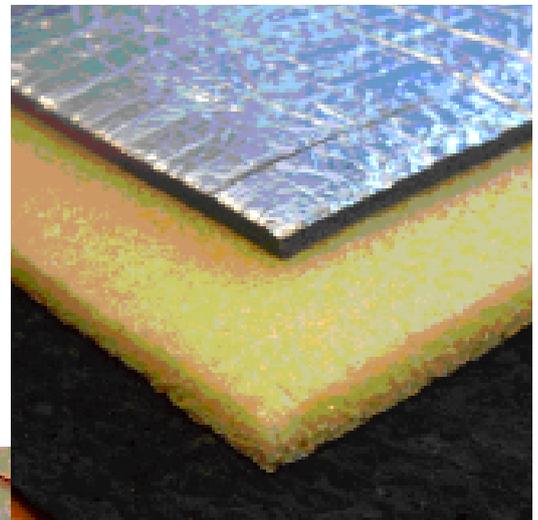
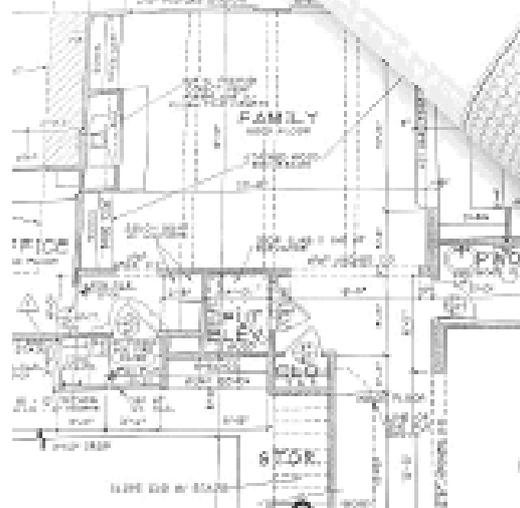
The need for acoustic and thermal insulation is now a requirement of Part E and Part L building regulations. DEVI offers an effective solution, in order to minimise heat loss and provides measurable sound proofing to meet these requirements. DEVI supply and install thermal and acoustic insulation to comply with specifications.

Install

DEVI offers a full installation service and aim to work within the constraints of the agreed build programme in order to hand over a completed floor solution. Please see floor constructions on page 6 for details on how DEVI heating systems are installed.

Screed

After installation of both the thermal/acoustic insulation and the underfloor heating, the floor screed is then laid, (depending on the floor construction). DEVI can specify the suitable screed for your application working in conjunction with a number of other companies. The completed floor is then ready for the laying of chosen floor finishes.



Product Features	deviflex DSIG	deviflex DTIP	deviflex DSIA	deviflex DSVK	devimat	devicell DRY
Cable construction	Single conductor	Twin conductor	Single conductor	Single conductor	Twin conductor	DTIP-10 cables used
Rated voltage	230/400V	230/400V	230/400V	400V	230V	
Watts per meter	20W/m	8, 10, 18 W/m	25 W/m	25 W/m	100 and 150 W/m ²	
Diameter	5.5mm	7.0mm	6.0mm	8.10mm	3.0-3.5mm	
Conductor insulation	PEX	PEX	PEX	PEX	FEP, teflon	
Sheath	PVC 90°	PVC 90°	PVC 90°	XPVC 90°	PVDF 120°	
Rated temperature	65°C	65°C	65°C	65°C	120°C	
Approval	IEC 800/CE	IEC 800/CE	IEC 800/CE	IEC 800	IEC 335-2-96/SEMKO	
Warranty	10 years	10 years	10 years	2 years	10 years	
Plate size						50 x 100 cm
Insulation value (U)						3
Thickness						13mm including 12mm flame retardent EPS and 1mm aluminium
Deformation strength						3.67 tonnes/m ²
Accessories in box						locking bushells

Product Features	devireg 130	devireg 550	devireg 535	devireg 330	devireg 850
Rated voltage	180 -250V~50Hz	180-250V~50/60Hz	180-250 V~50/60 Hz	180-250 V~50/60 Hz	180-250 V~50/60 Hz
Warranty	2 years	2 years	2 years	2 years	2 years
Temperature range room sensor	5°C to 45°C or off	5°C to 35°C or off	5°C to 35°C or off	TEMP. SETTING- -10°C to +10°C or off	TEMP. SETTING- -9.9°C to +0.1°C
Temperature range floor sensor only	20° to 50°C	20° to 50° C	5° to 45° or off		MELTING TEMP. SETTING- +1°C to +9.9°C
Resistive Load	16A/3600W	16 A / 3600W	230V~15A/3450W	250V~16A/10A	250V~3 x16A
Inductive Load	cos= 0,3 max. 4A	cos= 0,3 max.1A	cos= 0,3 max. 4A	3A	1A
IP Class	IP30	IP30	IP31	IP20	THERMOSTAT - IP30 SENSOR - IP67
Sensing Unit	NTC;150hm/25°C	NTC;150hm/25°C	NTC;15kOhm/25°C	NTC;15kOhm/25°C	

Product Application	deviflex DSIG	deviflex DTIP	deviflex DSIA	deviflex DSVK	devimat	devicell	devireg 535/550	devireg 130	devireg 850	devireg 330
New build - screeded floor										
New build - timber floor										
Renovation										
Frost Protection										
Ice and snow melting										

Testimonials



Omega 3, Bow, London Green Developments

“We wanted a modern, high-tech heating system that fitted the clean and simple design principles of the product and gave homeowners ultimate flexibility to maximise their living space and furnish it as they wish. You can have space where and when you need it. Nothing could be simpler or more practical.”

Marc Carter, London Green Developments.



Kew Riverside, London, St James Group.

“The St James Group chose DEVI because of the company’s well-established reputation in the market place, the quality and efficiency of DEVI’s products and the company’s friendly and efficient approach.”

Baber Malik, Project Manager, St James Homes.



Celtic Shores, Whitsand Bay, Cornwall.

“DEVI was chosen for Celtic Shores following our use of the product in previous developments where it has to be an economical, clean and controllable form of heating. Once again, the service provided was excellent and we are already using the system on another project.”

Barry Evans, TP Estates.



Donnington Elms, Newbury, Thomas Homes.

“We had a lot of technical questions which were all answered comprehensively and quickly. The installation was carried out professionally and efficiently and as a result we are now looking forward to working with DEVI on a second project.”

Dave Skeet, Build Director, Thomas Homes.



Front cover images: DEVI installed apartments, courtesy of Applecross and Redrow Homes.

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