Nexans Underfloor Heating Solutions
Nexans invented the heating cable in 1926. We are proud to be part of the world’s largest cable manufacturing group.

Nexans heating cables are a Norwegian invention and product. We have been producing heating cables since 1926. Over the years we have continued developing our products to meet the changing demands of the marketplace.

One example is our unique hidden splice, which provides a seamless integration between the hot and cold part of the cable. Another is our secure end seal which protects against moisture entering the cable.

Our manufacturing facilities are certified in accordance with the quality standard ISO 9001 and the environmental policy standard ISO 14001.

Nexans – global expert in cables and cabling systems
Nexans is the worldwide leader in the cable industry, with industrial presence in more than 30 countries and commercial activities throughout the world. Nexans employs 22,000 people and had sales in 2007 of euros 7.4 billion. Nexans’ know-how and innovation skills are used for developing increasingly competitive cables for any industry, from energy networks and telecommunications to railway projects, the oil and gas industry etc.

Nexans heating cables meet the highest quality standards and are certified by local electrical appliance organizations in all major markets. Our heating cables come with a 10 year warranty given that they are installed correctly according to the manufacturer’s instructions.

All products are designed and tested in accordance with international standards, such as IEC and CENELEC, and they meet the requirements of the European low voltage directive.

Hidden splice

- Worldwide leader in the cable industry.
- Industrial presence in more than 30 countries.
- Commercial activities throughout the world.
You will get more than warm floors when you choose underfloor heating from Nexans

Using electricity for heating your home is becoming more and more popular. Once you have decided to use electricity to heat your home, your choices of heating appliances are numerous. Underfloor heating is becoming the obvious choice for many.

High comfort
The heat is emitted from the floor, heating the surrounding air and surfaces, thus the temperature will be even throughout the room. The result is comfortable warmth, which is easy to control room by room.

Energy savings
When you compare wall mounted heating with underfloor heating, it’s proven that you can have a 2-3°C lower temperature setting to achieve the same comfort level. This results in a potential 5-10% reduction of energy consumption.

Clean and safe
An electrical underfloor heating system is safe and maintenance free. No sound is emitted when you use it and there are no detachable parts. The fact that the products are installed within the floor also ensures a high degree of fire- and electrical safety.

Health benefits
Underfloor heating is a perfect solution for those who suffer from dust allergies and asthma, as no dust gathering occurs as is the case with wall mounted appliances.

Economical and easy installation
Nexans heating cables are installation friendly due to their technical product features. They are also economical as they incur no yearly maintenance cost; further energy savings are obtained by using individual thermostats to control the heat.

Solutions for all room types
Underfloor heating is ideal in most types of rooms, for example bathrooms, toilets, hallways, living rooms, kitchens and rooms where children play. The floor is a large area with a low surface temperature. Producing heat under the floor however will ensure radiant heat from the floor and a favourable heat distribution throughout the room.
Applications

New buildings
• Tailor made underfloor heating systems
• Optimal comfort
• Energy efficiency

In new buildings, it can be decided during the planning phase which rooms are designed to have underfloor heating. This allows for a unique opportunity to design a tailor-made underfloor heating system for optimal comfort and efficient use of energy.

We normally recommend laying traditional heating cables in a 30-50 mm thick screed/concrete layer, which can later be decorated using tiles, parquet flooring, laminated wood, wall-to-wall carpets or other floor coverings. Heating cables can also be installed directly in suspended wooden floors.

In new buildings, it is also easy to ensure that the cables are properly insulated using thermal insulation as a base.

Renovation
• Thin floor solutions
• Easy installation
• Increased standard of your home

When renovating a building, it is usually the constructional depth that is the limiting factor. People do not want to have to carry out expensive, time-consuming work such as raising door sills, adapting doors etc.

Nexans manufactures thin floor solutions for underfloor heating in renovation. Some of these can be installed directly on a combustible surface, such as floor chipboard, and laid in a thin layer of self-levelling compound or directly in tile adhesive. Others can be installed directly under parquet or laminate flooring without using any compound.

If the available construction depth allows it, traditional heating cables can also be used for renovation purposes.

External applications
• Snow and ice free outdoor areas
• Quick installation
• Easy to regulate

Heating cables installed in the ground ensure that your driveway, stairs or entrance area are free of snow and ice throughout the winter. You also avoid the risk of injury to yourself and others by manoeuvring on snow and ice in front of your own home.

Nexans produces heating cables that can be installed directly in hot asphalt or concrete, or under stone blocks or slabs. You can choose whether to install heating cables in large areas or only where you need them most; driveways, fire escapes or steps in your entrance area.

Snow-melting heating cables are easy to regulate using modern thermostats specifically designed for this purpose. These thermostats ensure that the cables are switched off when it is dry on the ground or the temperature is above or below the pre-set temperature limits.
Nexans heating solutions

Applications:
These cables are all ideal for floor warming in concrete constructions. They are also suitable for use in snow-melting installations, for frost protection of roof gutters and drains, and soil heating.

Cable type will be specified according to the type of floor construction and/or whether it is an indoor/ outdoor project.

The single and twin conductor heating cable units have the unique hidden splice, and these are marked on the cable surface.

Floor constructions:
An optimal installation for bathroom floors where both the positioning of the cables and the floor construction are taken into consideration is shown below with two alternative solutions.

The screed/concrete should be laid so that the floor slopes downwards towards the drain. This ensures that all water falling on the floor drains away. In a bathroom it is very important that the screed/concrete layer is uniform and non-porous.
Applications:

**MILLIMAT™ – Heating Mat** is ideal for both renovation and new building projects. The heating mat consists of a thin twin conductor heating cable unit attached to an adhesive flexible glass fibre net. The thin heating cable unit is delivered with a 2.5 m cold lead.

The 100 W/m² mat is recommended for living rooms, hallways, kitchens and rooms alike. The mat can be installed on any type of sub floor, levelled and stable.

The 150 W/m² mat is recommended for bathrooms, toilets, laundry rooms and other areas requiring high output. The mat must be installed on a non-combustible sub floor, levelled and stable.

A floor in which heating has been installed during renovation is usually very quick and easy to regulate, because the heating mat is located near the top of the floor construction, resulting in low energy consumption.

The mat is adjusted to the room shape by cutting the net. The mat has a total thickness of 4.5 mm and a width of 50 cm.

**Basic solution for MILLIMAT™ floor:**

1. Insulation
2. Non combustible sub floor
3. MILLIMAT™
4. Thin screed/ slab
5. Membrane
6. Tile glue
7. Tiles/ floor covering
Dry floor solution

Applications:
MILLICABLE™ – thin twin conductor heating cable units (6 W/m) for both renovation and new buildings.

MILLICLICK™ boards covered with aluminiumfoil and with pre-cut slots for the MILLICABLE heating cable.

MILLICABLE in combination with MILLICLICK boards is an under-floor heating system that’s very easy to install. MILLICABLE can be installed directly under wooden floor coverings like parquet, laminate etc. without any use of concrete or levelling compound. The MILLICLICK boards have pre-cut slots for the cable which makes the installation very easy to perform. The boards are placed on a stable and levelled subfloor. Install standard parquet underlay between the parquet and the MILLICLICK boards.

The MILLICABLE is delivered with a factory made end-seal and a splice between the heating element and the cold lead (3.5 m).

MILLICLICK boards shall only be used together with MILLICABLE heating cable.

Snow and ice melting

Applications:
DEFROST SNOW are ready made twin conductor heating cable units for snow and ice melting applications such as driveways, courts, stairs etc. The units can be installed directly in hot asphalt (160°C) (320°F), or covered with concrete or flagstone and sand. DEFROST SNOW is equipped with a 10 m (32,8’) cold lead and integrated splice.

Technical data:
• Output ranges from 640 W to 3400 W
• Tolerance on element resistance: -5/ +10 %
• Linear load: 28 W/m (8,5 W/ft)
• Length of cold lead: 10 m (32,8’)
• Max. temperature energized, outer jacket: 65 °C (149 °F)
• Min. bending radius: 5 x cable diameter.
• Rated voltage: 230 VAC
• Max. temperature of hot asphalt: 160 °C (320 °F).

Construction:
• Solid resistance wire
• XLPE insulation
• Tinned copper drain wire
• Aluminium armour screen
• PVC outer jacket
• Integrated cold end splice
• Overall diameter: approx. 7.5 mm (0,3’”)
The Langhus factory, located 20 km south of Oslo, is a competence centre for Nexans Heating Cables. The factory was established in 1992, and is producing heating cables for the home market, as well as more than 30 export markets. In addition to this, the factory produces installation cables for the home market, and is serving as a logistics centre for all Nexans units in Norway.