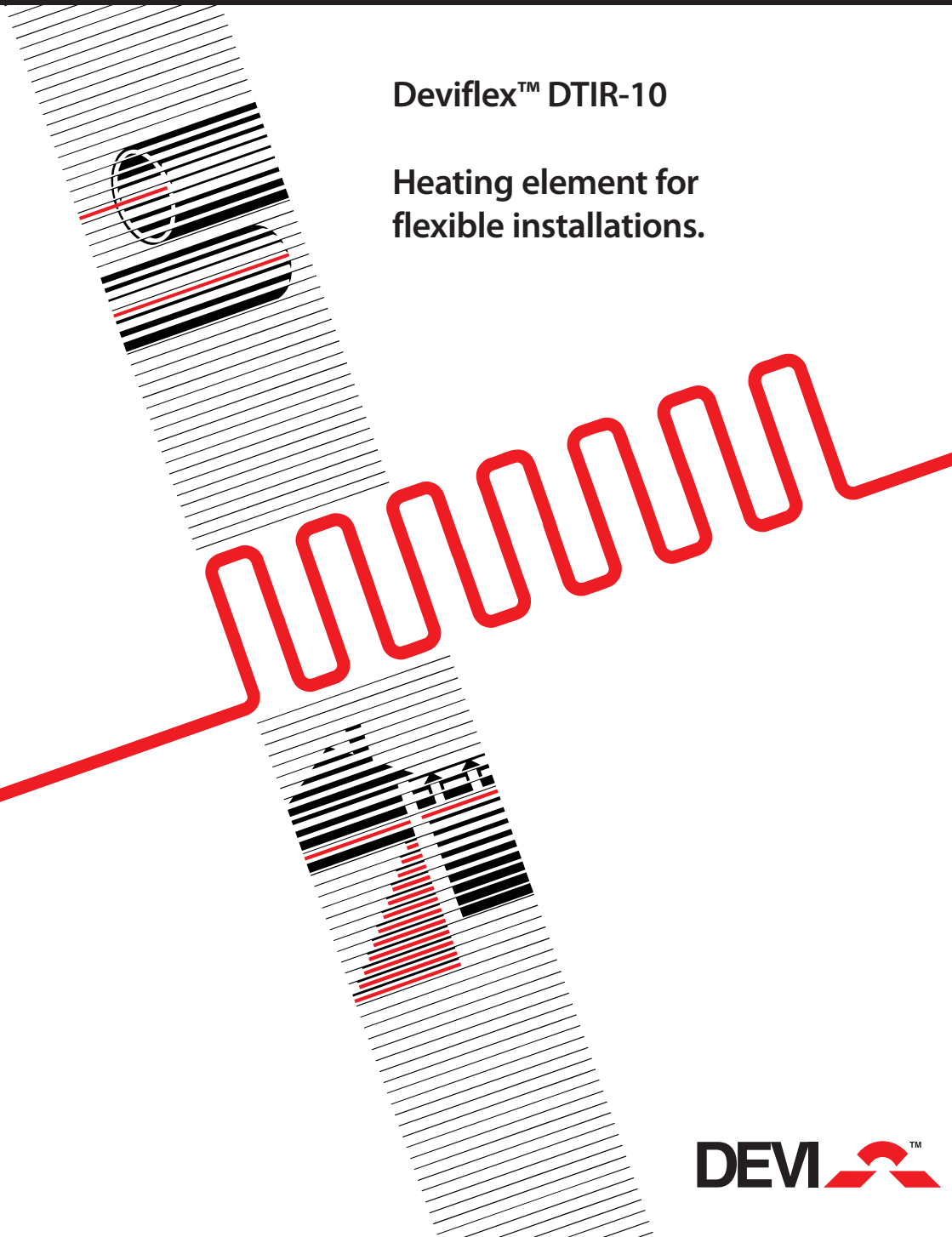


GB/DAS

# Installation Instruction

Deviflex™ DTIR-10

Heating element for  
flexible installations.



# Deviflex DTIR-10

Deviflex™ heating elements are primarily used when renovating existing floors where a low floor construction height is required. Deviflex™ DTIR is only approx. 4 mm thick, plus the thickness of the floor surface.

## Areas of use!

Deviflex™ DTIR-10 heating element is suitable for concrete, plaster, chipboard or wooden floors.

The element should be covered with a layer of minimum 5 mm of mortar or screed, followed by a suitable surface material.

The required output should be determined by an authorised electrician.

## NB!

Must be installed in accordance with local building regulations.  
Never cut or cross the red element

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## Deviflex™ specifications!

Heating element:	DTIR-10
Type:	2-conductor
Voltage:	230 Volt
Output:	10 W/m
Cold cable	4,00 m
Dimensions:	L = See table, page 9 T = approx. 4 mm
Wire insulation:	FEP
Outer sheath:	PVC 90°C
Max. temperature:	90°C
Bending radius:	Min. 30 mm

### Connection

Phase - Black  
Neutral - Blue  
Earth - Shield/Screen



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*The insulation value of floors in which Deviflex™ DTIR has been installed must not exceed approx. 0.125 m<sup>2</sup> K/W.*

### Typical insulation values

Thin floor with tiles, vinyl	0.035 m <sup>2</sup> K/W
Thick floor with vinyl or similar	0.040 m <sup>2</sup> K/W
Floor with parquet, cork or carpet	0.125 m <sup>2</sup> K/W
Heavy-duty fibreboard or wall-to-wall carpet	0.175 m <sup>2</sup> K/W
Wooden floor on battens	0.375 m <sup>2</sup> K/W

## ***The following applies during installation:***

Maximum output per m<sup>2</sup> and temperature limit depending on base and floor surface.

<b><u>Base/floor surface</u></b>	<b><u>Max. output</u></b>	<b><u>Min. C/C</u></b>	<b><u>Max. temperature</u></b>
On wood, chipboard, plaster under tiles, carpet, wooden floors or laminate floors	100 W/m <sup>2</sup>	100 mm	+30°C
On concrete under tiles, carpet, wooden floors or laminate floors	150 W/m <sup>2</sup>	65 mm	+ 35°C

***Important! Do not exceed the output and temperature figures shown above.***

For information on adjusting the temperature limit, please refer to the installation instructions for the thermostat.

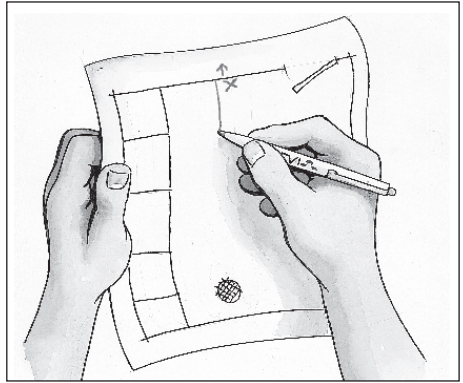
## **Wooden floors, laminate floors, carpets made of artificial fibres**

Please consult the manufacturer or supplier for information on suitable temperatures if the product is to be installed under wooden floors, laminate floors or carpets made from artificial fibres.

The temperature limit should be adjusted in accordance with the manufacturer's/ supplier's recommendations in order to prevent damage to the floor surface. Note, however, that the limit must not exceed the figures specified in these installation instructions.

# General Installation Guidelines

The following guidelines must be observed when installing Deviflex™.



## Preparation

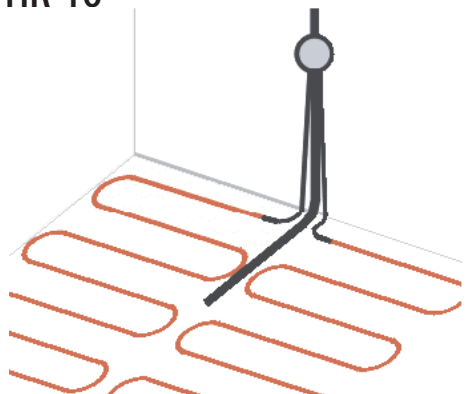
1. All traces of old floor covering must be removed so that the concrete surface or the floorboards are visible.
2. Clean the surface and remove any loose particles.
3. The floor must be securely anchored to prevent it from shifting. Floor plaster is recommended for wooden floors to prevent the formation of cracks in joints and clinkers. The floor must be smooth in order to prevent any damage to the heating element.
4. The floor must be primed.
5. Any gaps in the floor around outflow pipes, floor drains and doorsills, or near the outer edges where the floor screed may penetrate, must be filled.
6. You are advised to draw up an installation plan before laying out the element. Use page 10 in this manual to draw up a plan. Remember to indicate the sensor tube, connection tails and the connection to the cold cable.

## Installing multiple Deviflex™ DTIR-10

Please note the following important points:

A maximum of 2 elements may be connected in parallel per thermostat.

If 2 elements are connected to the same thermostat, the C/C distance must be the same for the 2 elements.



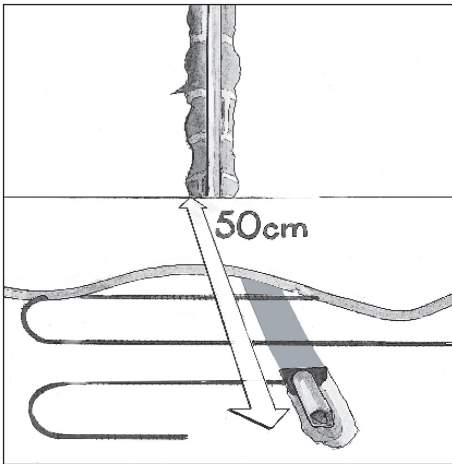
# Installing the Deviflex™

Do not install the heating element under fitted cupboard or other obstacles mounted to the floor.

Calculate the required element length and output for the room on the basis of the room's size and insulation conditions.

Calculate the exact C/C distance using the following formula: surface area divided by length of element (e.g. 1 m<sup>2</sup> divided by 10 m element gives a C/C distance of 0.10 m = 10 cm).

The connection between the cold cable and the heating element should be placed in the floor. The black cold cable should be installed inside a flex pipe. Lead the pipe up to the thermostat connection box.



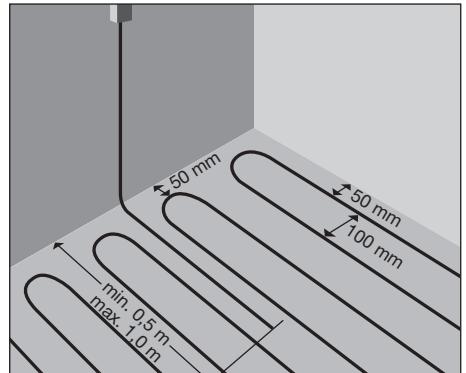
The thermostat sensor should be installed in a pipe or a protective tube, approx. 0.5–1 m from the edge of the floor. Lead the pipe up to the thermostat connection box.

The sensor should be placed so that it can scan the temperature between two loops. It may be necessary to countersink the pipe or tube into the floor to ensure that it is installed at the same height as the heating element.

Start by positioning the element half the C/C distance from the wall (in this case 50 mm from the wall), and then lay the element using the calculated distances.

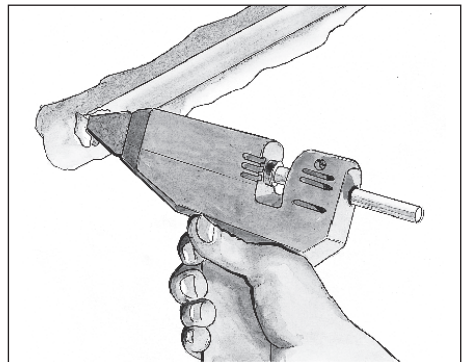
Glue the element to the base using hot melting glue.

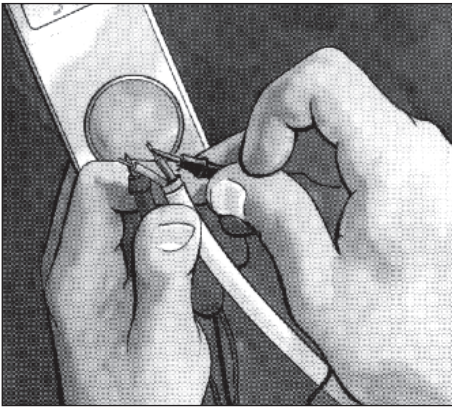
When you reach the wall then make the bend of the element half the C/C distance away from the wall (in this case 50 mm).



Maintain a safe distance from e.g. toilet, door sills and any areas where objects such as banisters, etc. are to be fixed to the floor.

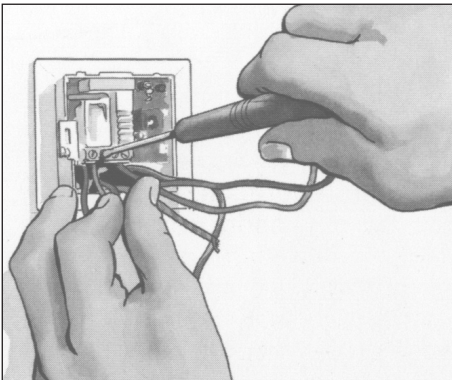
Seal the pipe at the end so that the screed doesn't penetrate the hose.





Test the heating cable in accordance with the table on page 9 (resistance) before the screed is poured.

The sensor and cold cable (black) should be connected to the Devireg™ thermostat.



**NB!**  
**Must be connected by an authorised electrician.**



The heating cable is designed for under floor heating purposes only.

The installation should be equipped with a circuit breaker.

The Deviflex™ DTIR are to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA.

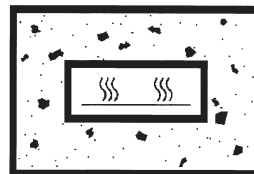
Furthermore the Deviflex™ DTIR must be supplied through an all-pole disconnection from the supply mains.

When covering the cable with screed, please follow the manufacturer's recommendations as regards the drying time of the screed.

Humidity seals and floor coverings such as vinyl and wooden floors require all moisture in the screed, depending on the thickness, to have been eliminated fully in accordance with the drying times recommended by the manufacturer.



The under floor heating must not be used until the screed has dried out fully.



The heating element must be embedded in concrete or similar.

# Controlling the heating element

Deviflex™ is certified to be used together with one of the following thermostats:

Devireg™ 130M

Devireg™ 330M

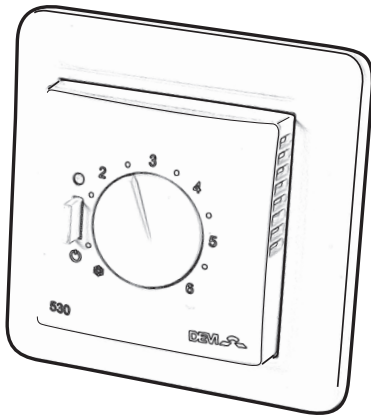
Devireg™ 530M

Devireg™ 535

Devireg™ 550

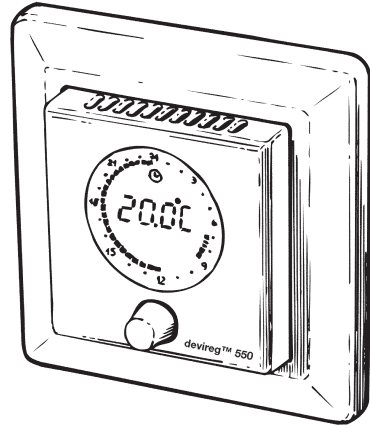
For controlling the Deviflex™ DTIR-10 we recommend the use of the Devireg™ 530M or the Devireg™ 550.

Devireg™ 530M



Deviflex™ DTIR-10 may be controlled by means of Devireg™ 530 which is flush mounted. The thermostat keeps the floor at a constant temperature by means of the floor sensor, which should be placed between two loops.

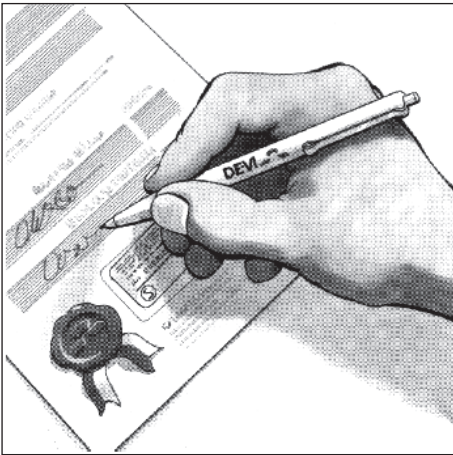
Devireg™ 550



Deviflex™ DTIR-10 may be controlled by means of Devireg™ 550, an intelligent thermostat with digital display and built-in timer for lowering the temperature at night. Please contact your supplier for further information.

## IMPORTANT

Please consult the manufacturer of flooring material for information on suitable temperatures if using Deviflex™ DTIR-10 under wooden floors, laminate floors or vinyl.



The authorised electrician who installed and connected the product should complete the guarantee certificate. The guarantee certificate should remain in the possession of the customer.

The guarantee is subject to the guarantee conditions listed on page 11.

The underfloor heating system is now ready to use.

Increase the floor temperature gradually and adjust it until it reaches what you feel is a comfortable level depending on the type of room and your personal preferences.



## Deviflex™ DTIR-10 W/m , 230 V

Length	Output	Voltage	Resistance
12m	110W	230V	481Ω
18m	170W	230V	311Ω
24m	230W	230V	230Ω
30m	280W	230V	189Ω
40m	415W	230V	127Ω
50m	500W	230V	106Ω
60m	656W	230V	93,6Ω
70m	690W	230V	76,1Ω
80m	820W	230V	64,5Ω
90m	960W	230V	55,1Ω
100m	985W	230V	53,7Ω
115m	1110W	230V	45,4Ω
130m	1250W	230V	42,2Ω
140m	1380W	230V	38,2Ω
165m	1700W	230V	32Ω

The output and C/C distance are determined on the basis of the type of flooring employed and the required output for the room.

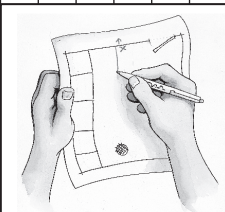
***Important! See information regarding maximum output and temperature limit on page 2.***

## Deviflex™ DTIR-10 W/m , 230 V

Length	Output	Voltage	Resistance
10m	100W	230V	Ω
20m	200W	230V	Ω
30m	300W	230V	Ω
40m	400W	230V	Ω
50m	500W	230V	Ω
60m	600W	230V	Ω
70m	700W	230V	Ω
80m	800W	230V	Ω
90m	900W	230V	Ω
100m	1000W	230V	Ω
125m	1250W	230V	Ω
140m	1400W	230V	Ω
170m	1700W	230V	Ω

The output and C/C distance are determined on the basis of the type of flooring employed and the required output for the room.

***Important! See information regarding maximum output and temperature limit on page 2.***



**Use this page  
to sketch the  
installation**

## The DEVI Warranty:

You have purchased a Deviheat™ system which we are sure will serve to improve the comfort and economy of your home.

Deviheat™ provides a complete heating solution with Deviflex™ heating elements or Devimat™ heating elements, Devireg™ thermostats and Devifast™ fixing strips.

Should you, against all expectations, experience a problem with your Deviheat™ system, you will find that DEVI, whose products are manufactured in Denmark and sold throughout the European Union, is subject to the standard regulations pertaining to product liability as specified in EU directive 85/374/CEE as well as all applicable legislation in the individual countries on the following conditions:

DEVI offers a 10-year guarantee on all Deviflex™ heating elements and Devimat™ heating mats, and a 2-year guarantee against cable defects and production defects in connection with any other DEVI products.

The guarantee shall be valid only if the GUARANTEE CERTIFICATE is completed -correctly and in accordance with the instructions, and provided the fault is inspected by or submitted to DEVI or an authorised DEVI dealer.

Please note that the GUARANTEE CERTIFICATE must be completed in Norwegian, and that the ISO code for Norway, NO, should be printed in the top left-hand corner on the front of the Installation Guidelines.

DEVI shall undertake any repair free of charge or supply the customer with a new unit. Repairs shall be carried out at no further cost to the customer. In the case of faulty Devireg™ thermostats, DEVI reserves the right to repair the unit free of charge and without any unreasonable delays for the customer.

The DEVI Guarantee shall not cover installations that have been carried out by non-authorised electricians, faults which arise as a result of misuse by other suppliers, damage caused by third parties, incorrect installations or consequential damage. All work will be invoiced in full if DEVI is required to inspect or repair faults that have arisen as a result of any of the above. The DEVI Guarantee shall not extend to equipment which has not been paid in full.

DEVI will, at all times, provide a rapid, effective and honest response to all queries and reasonable demands from our customers.

The above guarantee covers product liability only, while purchases are subject to Norwegian legislation.



# Warranty Certificate

The DEVI Warranty is granted to:

Name:

Telephone:

Address:

Zip code:

## Please Observe!

In order to obtain The DEVI Warranty, the following must be carefully filled in. See other conditions on the overleaf

Element layed by:

Laying date:

Connected by:

Inst. date:

Element length:

Watt:

Art. number:

Installed in:

- Concrete floor  
 Wooden floor

- Tiles  
 Vinyl

- Vinyl

Suppliers Stamp

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