

ENGINEERING
TOMORROW

Danfoss

Why choose floor heating?

**Comfort, a lower
heating bill
and much more ...**

5 %

energy savings for
every degree you
lower your room
temperature using
floor heating.



heating.danfoss.com

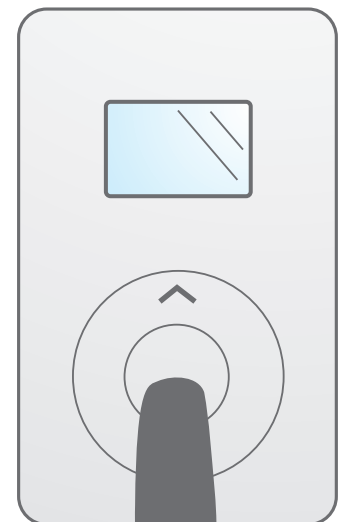
+80 years

of experience with
improving everyday
comfort. Our
experience is your
safety.

A HISTORY OF COMFORT FOR YOU

Creating the thermostatic radiator valve and being the first to introduce **wireless floor heating control**, is only a small part of our long life within comfort control.

Across the globe millions of people enjoy what Danfoss founder Mads Clausen invented decades ago. With Danfoss Floor Heating solutions we continue his mission in bringing families affordable home comfort, without compromising quality..



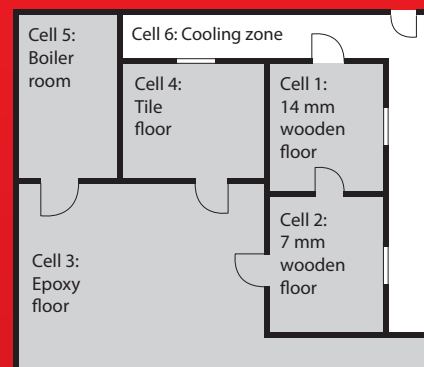


The most advanced test centre to secure comfort and energy savings

At our test facility in Vejle, Denmark we test our floor heating systems in combination with other heat emitters and heat sources, while simulating outdoor temperatures. This allows us to refine and perfect our solutions to suit your house or apartment, so you can benefit from superior comfort and energy savings.

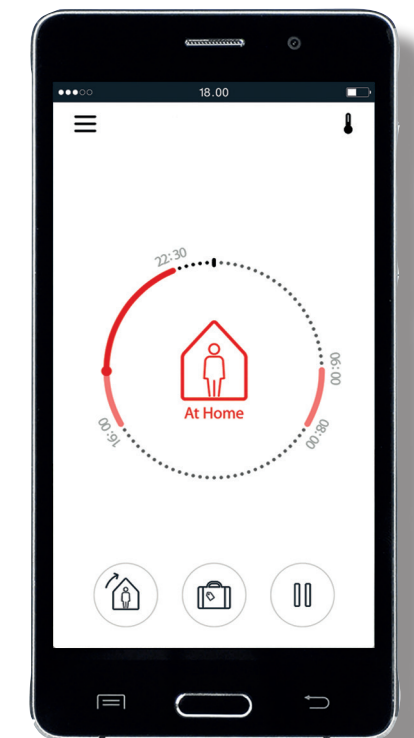
All floor heating systems are thoroughly tested:

- Heat absorbing time – to measure how different wall materials impact on the floor heating reaction time
- Outdoor temperature simulation – to simulate impact under different temperature conditions
- Floor heating reaction time – to identify when to open and close for energy supply
- Impact on the entire system – to measure the impact of a change on the entire system and not just the floor heating



In the control room, all data from the sensors in the test cells are collected every minute. Engineers use this data to optimize product performance in terms of comfort and energy savings.

*Danfoss Link.
The entire home
**at your
command***



You Tube



Experience Danfoss Link on YouTube https://www.youtube.com/watch?v=HN8KGY_nLoU

Product highlight: Danfoss Link™

Danfoss Link™ CC Central Controller – intuitive touch screen and access point:

- Remote access with Danfoss Link™ App
- Makes temperature scheduling easy. Save 5% energy for every degree the room temperature can be lowered
- Adaptive learning ensures the right temperature at the right time
- Put entire heating system in 'At Home', 'Away/Asleep', 'Pause' or 'Vacation' mode from a single central point
- Wireless for easy installation
- Very accurate control with e.g. PID-controlled *living connect*® for more comfort



1

central controller ensures comfort and makes it easy to save energy.

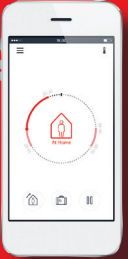
Easy wireless temperature control from one access point – all around the house:

1. *living connect*® Electronic radiator thermostat
2. Danfoss Link™ RS Room Sensor Room sensor for radiator and floor heating control
3. Danfoss Link™ HC Hydronic Controller Hydronic controller for floor heating
4. Danfoss Link™ App Easy temperature control from your smartphone

2.



4.



1.



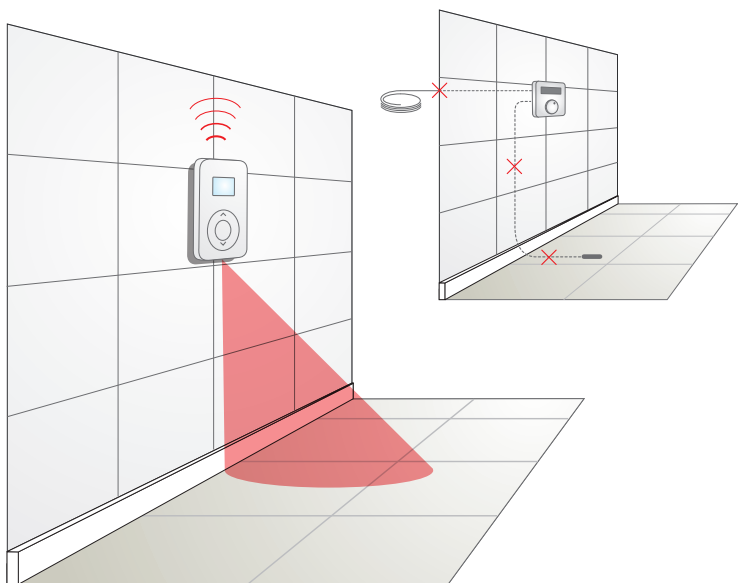
3.



A simple
smart home solution

Product highlight: CF2+ wireless floor heating system

- CF2+ wireless system is easy to use and provides flexibility:**
- No wires. This way you can always move the thermostat if you need to redecorate the room
 - No wires means no milling on the wall. Milling can lead to traces and marks on the wall
 - Reconnects automatically in the event of power failure
 - The two AA batteries only need to be changed every 2-3 years
 - Can be used in cooling systems. Ask your installer for more information
 - Optional remote controller for e.g. week scheduling



Wireless infrared floor sensor thermostat:

- Measures the floor surface temperature for more accurate control (as opposed to sensor embedded in concrete)
- Perfect for tiles in e.g. bathrooms where comfortable floors are desired
- Max. temperature option for protection of valuable wooden or quarry-tiled floors
- Optional switch from floor surface temperature to room temperature control

Product highlight: Danfoss Icon™ 230V wired

- Comfort control, made to blend in**
- Designed to look like a light switch
 - User interface that will fade out when not in use
 - Touchscreen control with icon-based navigation
 - Flush with the wall with a depth of only 11 mm (in-wall version)
 - Available as both in-wall and on-wall
 - Available in three versions: Dial, Display and Programmable

Learn more at:
icon.danfoss.com



Arrived home early?
> Press "At home" icon

Or change the temperature for "At home" mode?
> Press "At home" icon again

Leaving early?
> Press "Away" icon

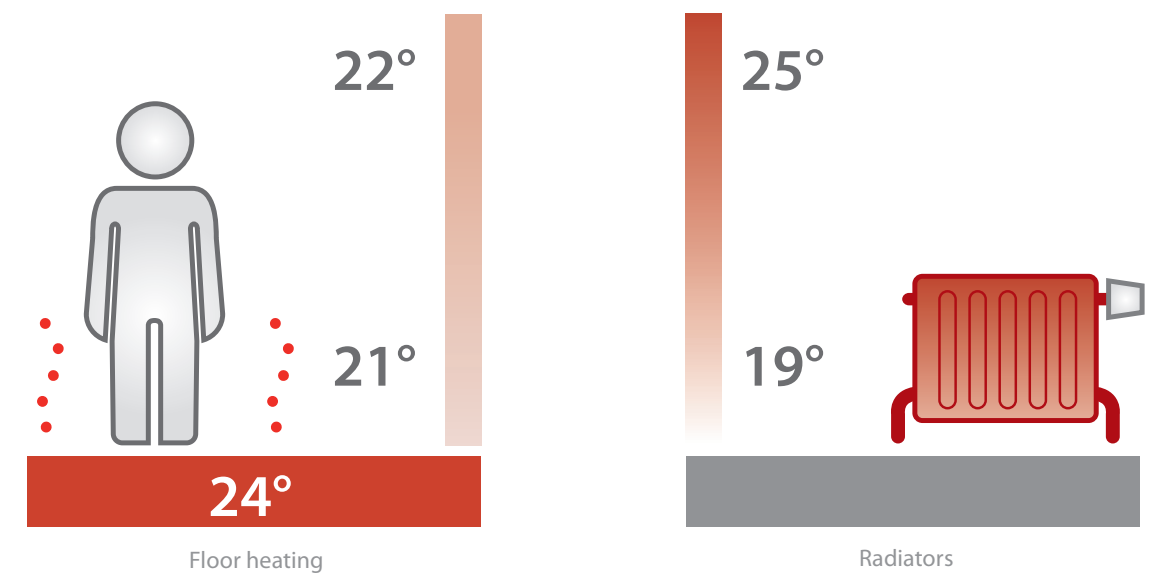
Or change the temperature for "Away" mode?
> Press "Away" icon again

Going to bed early?
> Press "Asleep"

Or change the temperature for "Asleep" mode?
> Press "Asleep" icon again

Want to schedule the week or access other settings?
> Press "Setting" icon

6 GOOD REASONS FOR CHOOSING FLOOR HEATING



#1 Comfortable **warm floor**

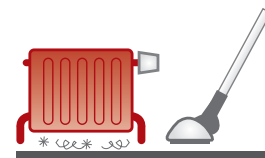
- Floor heating provides comfortable heating, as your feet are kept comfortably warm while your head is kept slightly cooler. Most people find this difference in temperature between feet and head most comfortable

#2 No radiator Easy cleaning

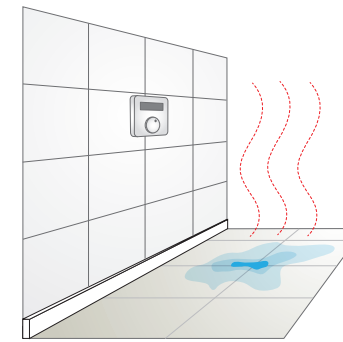
- Radiators collect dust – and cleaning around them is difficult
- Floor heating is hidden under the floor and makes cleaning a breeze



Floor heating

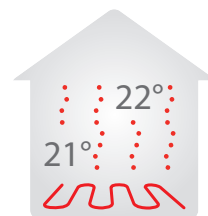


Radiators

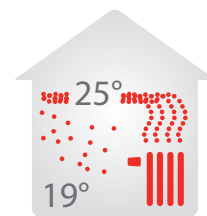


#3 Comfort and energy savings

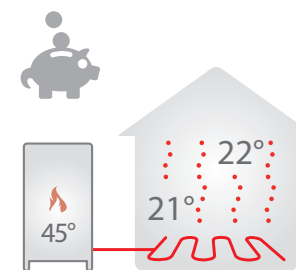
- Equally and comfortably distributed heating makes it possible to lower the room temperature and still feel warm
- For every degree the room temperature can be lowered, 5% energy is saved



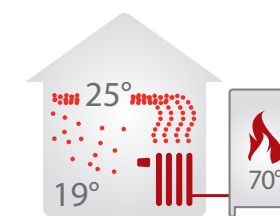
Floor heating



Radiators



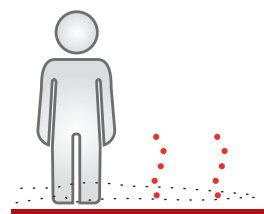
Floor heating



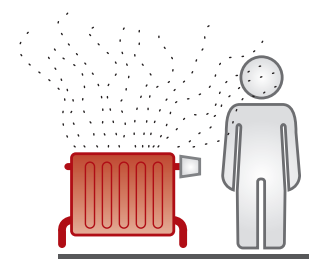
Radiators

#4 Less dust in the air

- Due to the large heating surface of floor heating, less dust is whirled up
- Warm radiators move a lot of heated air upwards from the grilles – and the dust travels with it



Floor heating



Radiators

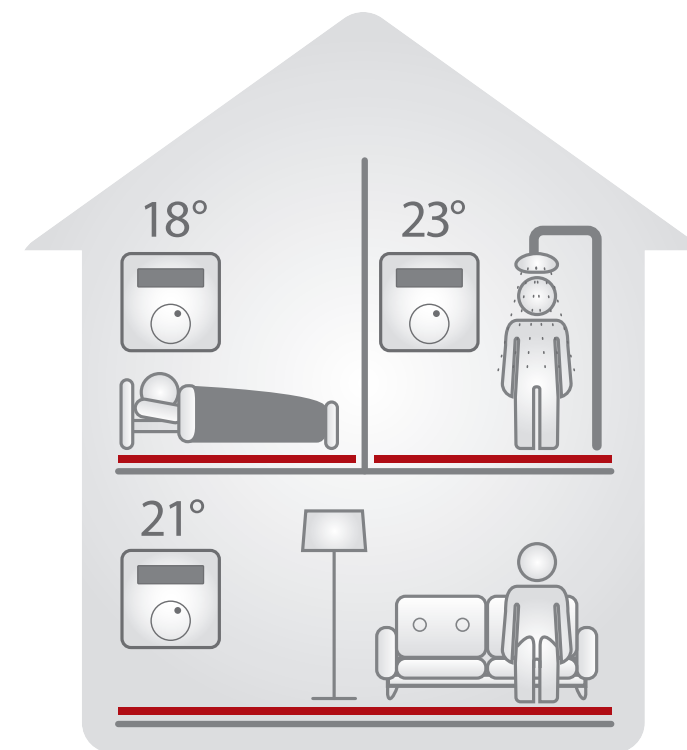
#5 Dry up wet floors

- Most people are familiar with the problem of water on the bathroom floor
- With floor heating, water evaporates quickly and the floor becomes dry and safe again

#6 Savings through lower supply temperature

- Floor heating does not require nearly as high supply temperatures as radiators, since floor heating has a larger surface from which energy is emitted
- Heat sources such as gas boilers run more efficiently at low temperatures

6 RECOMMENDATIONS WHEN CHOOSING FLOOR HEATING



#1

Floor heating should
be room controlled

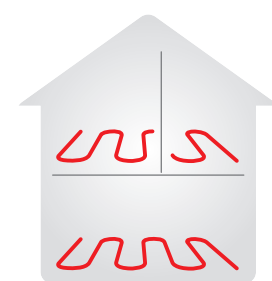
- The desired room temperature differs from say living room to bedroom
- Floor heating is automatically reduced or turned off when the desired temperature is met which lowers your energy bill
- This is why room control is even a legal requirement in some European countries

TIP! Remember to ask your installer for room controls.

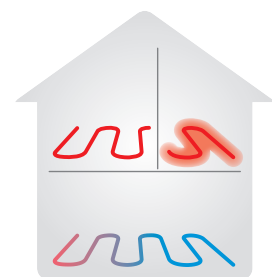
#2 Perfect system balance

- The Danfoss water supply system (manifolds) has pre-setting valves. They ensure that the right amount of energy (heated water) is distributed to each room
- Comfort levels are thereby reached with the least energy consumption

TIP! Remember to ask your installer for a manifold with pre-setting.



With pre-setting

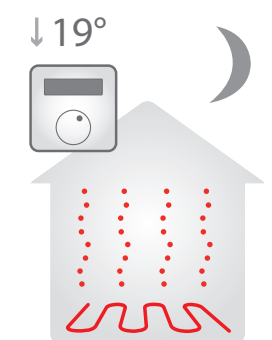


Without pre-setting

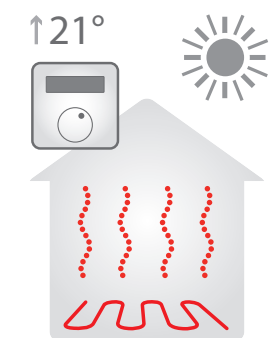
#3 Savings with temperature setback

- Temperature setback during vacation, night or daytime can be scheduled or activated when ever you want
- Save 5% energy for every degree you lower the room temperature

TIP! Remember to ask your installer for room controls with scheduling option.



Night temperature setback

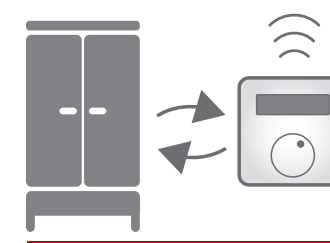
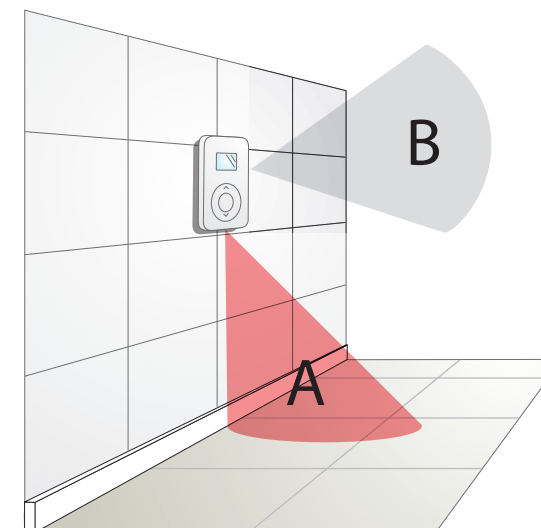


Day comfort temperature

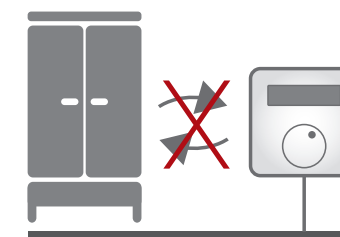
#4 Control comfort by room or floor temperature

- Floor heating lets you control the heating based on floor temperature (A) or room temperature (B) – simply set a temperature that feels comfortable!
- The unique and patented infrared CF-RF room thermostat technology lets you control the surface temperature very accurately

TIP! Ask your installer for infrared floor temperature control.



Wireless thermostats

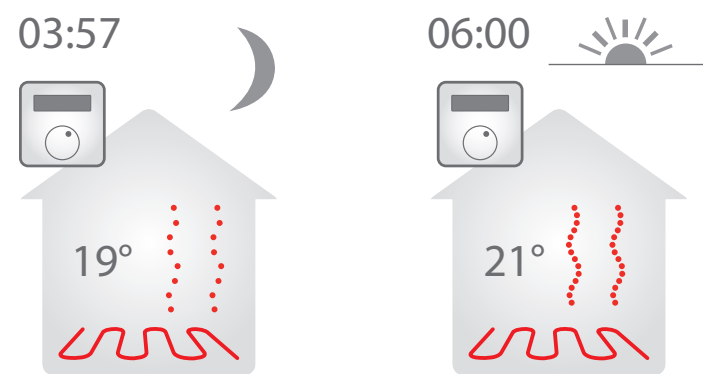


Hardwired thermostats

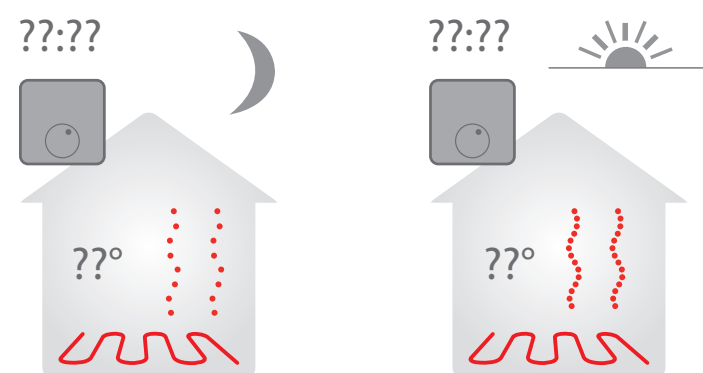
#5 Freedom to decorate

- With wireless room thermostats, furniture can be placed as required without having to rewire

TIP! Remember to ask your installer for wireless solutions.



With adaptive learning



Without adaptive learning

#6 Adaptive learning with intelligent forecasting

- If you schedule a desired temperature for e.g. 06:00 in the morning, the system will calculate when to initiate heating, in order to reach the desired temperature in time for breakfast

TIP! Remember to ask your installer for room controls with adaptive learning (CF2+, Danfoss Link™ or Danfoss Icon™).



Comfort
+
Care
=
CF2+



See the entire Danfoss floor heating range at **heating.danfoss.com**

Danfoss has been designing and developing heating control systems for more than 80 years. Throughout that time, it has been our goal to continuously innovate, perfect, and refine cutting-edge heating and cooling solutions.

Or contact your
local installer now

Danfoss A/S · Heating Solutions · Ulvehavevej 61 · DK-7100 Vejle · Tel. +45 7488 8500 · Fax +45 7488 8501
E-mail heating@danfoss.com · www.heating.danfoss.com

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without consequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.