

### Danfoss Link™ HC/RS floor heating system

Your floor heating system consists of three main components:

- Manifolds (typically located in a utility cabinet) distribute heat to the individual rooms and back.
- The master controller turns the heat on and off at the individual valves feeding the rooms.
- Room sensors measure the room temperature and can be used to set the desired room temperature.



### How does floor heating work?

The principle of floor heating is to heat the room from below, which is an exceptionally comfortable heating method.

Floor heating pipes can be embedded directly into the concrete slab (heavy/wet floor heating), or special heat distribution panels can be used (e.g. SpeedUp) located closer to the finished floor (light/dry floor heating).

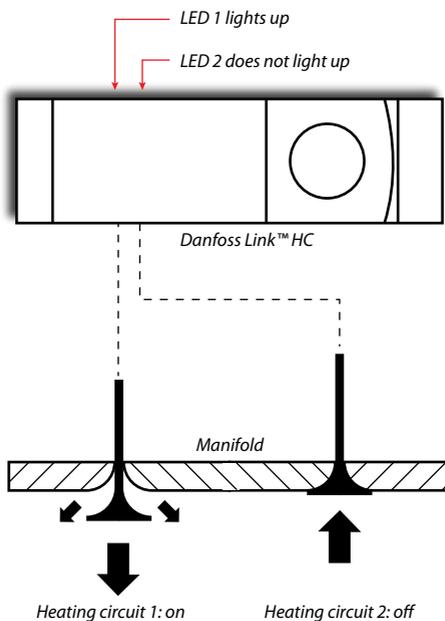
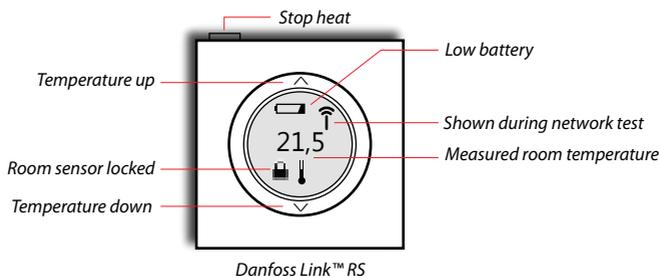
*Please note: Up to 95% of all systems are installed as heavy floor heating. Contact your installer if you are in doubt as to whether your system has been installed as heavy or light floor heating.*

**Heavy floor heating** has a relatively long response time. It will generally take about 1-2 hours per adjusted degree for the system to reach the desired room temperature.

On very few days in the year, typically during transitional periods, temperatures slightly over or under those set must be expected. This occurs when the weather changes faster than the controller is able to keep up, e.g. in the event of sudden periods of intense sunlight or sudden, significant drops in temperature.

**Light floor heating** has a relatively short response time. It will generally take about 20 minutes for the system to achieve the desired room temperature for each adjusted degree.

Overview of display and buttons



## Can I use temperature reduction periods when I have floor heating?

Yes, you can, as long as you keep certain things in mind.

### Heavy floor heating

We recommend one long temperature reduction period (at least 7 hours) with a slightly lower **economy temperature** setting.

The difference between the **comfort** and the **economy temperature** must not be more than 1-2 degrees.

Lowering the temperature too much will prevent the system from reaching the low temperature and no energy saving will be achieved.

*Please note: You should be particularly aware of this if your heat source is a heat pump.*

If you attempt to achieve too great a reduction in temperature you risk the heat pump having to activate its supplementary heat source (electric heating element) when reheating begins. This will have a negative impact on your energy consumption.

### Light floor heating

We recommend setting a lower **economy temperature** for one or two extended periods.

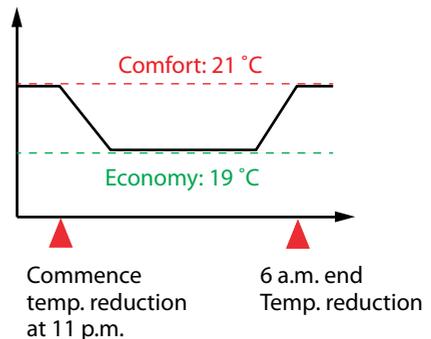
The difference between the **comfort** and the **economy temperature** must not be more than 3-4 degrees, as otherwise the system will not be able to keep up.

*Please note: You should be particularly aware of this if your heat source is a heat pump.*

If you attempt to achieve too great a reduction in temperature you risk the heat pump having to activate its supplementary heat source (electric heating element) when reheating begins. This will have a negative impact on your energy consumption.

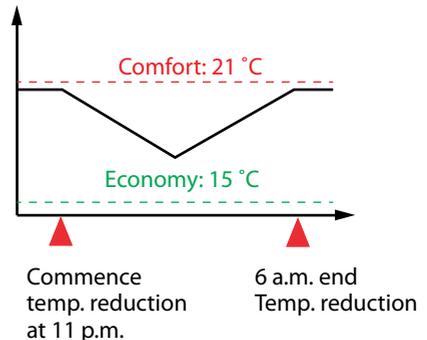
### A good example

Savings achieved



### The wrong way

No or negligible energy saving

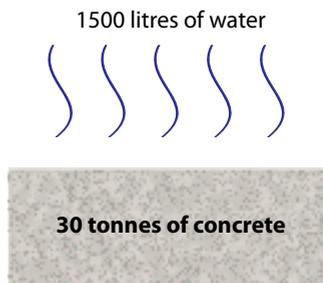


### Operating economy

You should be aware that for the first year, heating expenses for a newly laid, heavy floor heating system will be 20-30% higher.

This is because the energy required to evaporate the water trapped in the concrete can only be derived from the heating system.

In a 150 m<sup>2</sup> house with heavy floor heating, some 1500 litres of water have to evaporate during the first year.



### Opening windows to ventilate a room

When ventilating a room, you can use the heat-stop button on the room sensor in that room.

By pressing the button, all heating in the room concerned will be stopped and the display will turn completely blank.

Pressing the button again turns on the heat and the current room temperature will be shown in the display.

*Please note: You can lock the heat-stop button if you are afraid of accidentally pressing it or e.g. have young children in the house. See the front of this user guide: **Does the Danfoss One® system have a tamper-proof lock?***

If you have a Danfoss Air ventilation system, it is of course not necessary to open the windows.

