

# Finfloor

Instructions for installing Finfloor  
lamininate flooring over underfloor  
heating/cooling

## Water underfloor heating with laminate flooring

If you are installing a water underfloor heating system when using laminate flooring, the following should be considered before installing:

1. You will need to wait at least 21 days after installing your water heating system to ensure the moisture content is less than 1.5% CM. If it is higher, you will need to wait until this value is reached.

As a general rule, the following drying values should be taken into account with wet installations. As in this case:

	With heating system	Without heating system
Cement base	1,5 % CM (60% RH)	2,0 % CM (75% RH)
Anhydrite base	0,3 % CM (40% RH)	0,5 % CM (50% RH)

2. Heat the system to a surface temperature of 18°C and maintain this for 3 days. The material boxes are conditioned during these 3 days at the site where the installation is to be carried out.
3. The surface temperature of the underfloor (18°C) is maintained whilst the flooring is being laid.
4. When the installation is finished, the surface temperature is maintained for 3 more days.
5. After 3 days, the temperature can be gradually increased by 5°C per day. The temperature of the underfloor should not exceed 28°C.
6. Keep in mind that using rugs and large carpets can overheat the area underneath, which can damage the laminate flooring.
7. The temperature conditions that should be maintained are: +/- 20°C air temperature, and a relative humidity of 50-70%. In very dry situations, the use of a humidifier is recommended to raise the relative humidity.
8. The heating should be switched on and off gradually (5 degrees at a time). AVOID ABRUPT TEMPERATURE CHANGES

### Warning!

Excessive heat applied to the floor can lead to gaps in the joints.

### Important

For laminate floor installations with underfloor heating systems, the use of a suitable underlay is essential, which must in any case have the following characteristics:

- Vapor barrier: the underlay must have a non-micro-perforated plastic film (polyethylene film) incorporated into the blanket to act as a barrier to moisture produced by condensation..
- The underlay and laminate flooring assembly must have a thermal resistance of less than 0.150 m<sup>2</sup>K/W to achieve adequate heat transfer.

Silent underlay meets these requirements.

The Finfloor and Silent Underlay solution is suitable for use with water heating systems.

## Water underfloor cooling of laminate flooring

When using a cooling system to cool a laminate floor:

- It is the responsibility of the cooling system manufacturer to ensure that the controls of the equipment are such that the floor temperature is NEVER less than 3°C (for safety) above the room air dew point.
- For floor cooling, a total thermal resistance (floor + underlay) preferably below 0.09m<sup>2</sup> K/W is needed.

If the total heat resistance of your Finfloor and its underlay is high, you must note that the cold transfer will suffer a certain loss of cooling capacity.

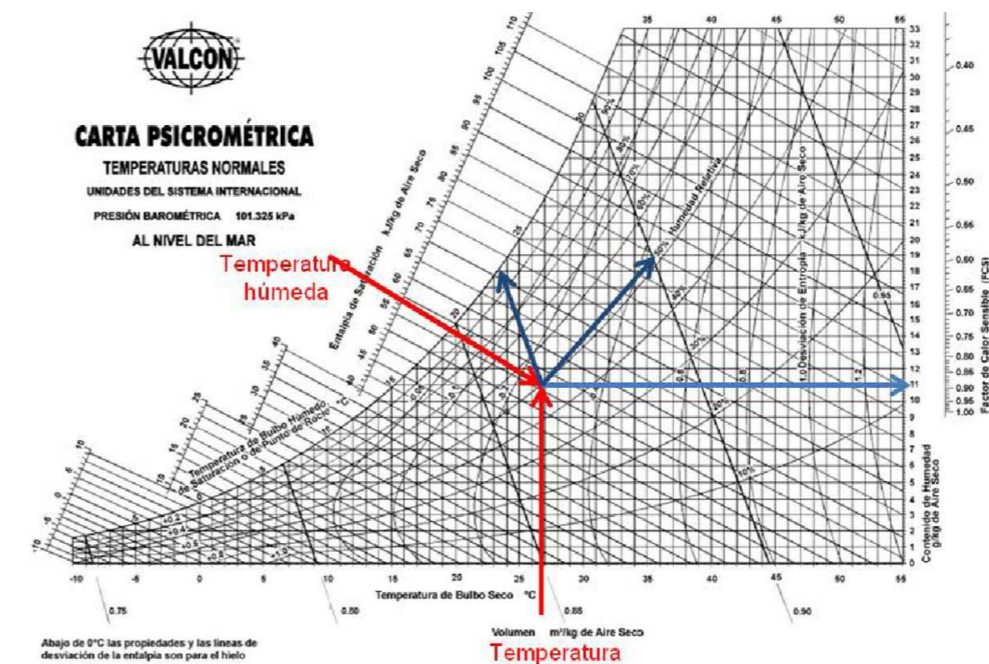
Finfloor can be installed with aero-thermal or heat pump radiant cooling systems, following the instructions of the installer of the cooling equipment to avoid condensation.

A floor cooling system must be designed with consideration of the dew point temperature of the room in which the floor is installed. With the flooring can be cooled with avoiding the risk of condensation.

For example:

If we have a room at 30°C and 50% relative humidity, the dew point temperature is 18°C.

Therefore, the refrigeration system can cool down to 18°C + 3°C safety margin, i.e around 21°C.



Source: CSIC virtual science museum

## Electric underfloor heating of laminate flooring

Electric Underfloor Heating systems can be installed (like water underfloor heating) inside the screed, which is called a wet installation, or on top of the screed, which is called a dry installation.

Dry-installed electric underfloor heating systems do not require a special start-up before the laminate floor is laid.

As a general rule, the following drying should be taken into account for dry installations, as in this case:

	With heating system	Without heating system
Cement base	2,0 % CM (75% RH)	2,0 % CM (75% RH)
Anhydrite base	0,5 % CM (50% RH)	0,5 % CM (50% RH)

1. The maximum surface temperature allowed of Finfloor is 28°C.
2. Both at the beginning and at the end of the heating period, the temperature changes should be gradual (max. 5°C/day).
3. Heat build-up should be avoided, so take into account the layout of your heating system when laying carpets, rugs or furniture (e.g. by leaving insufficient space between the furniture and the floor).
4. Always use carpets/rugs that are compatible with underfloor heating. Compatible carpets/rugs are identified by the following symbol..



This suitability symbol means that the TOG value of the rug/carpet (Thermal Overall Grade) is less than 2m<sup>2</sup>·K/W.

5. The installation plan of the radiant heating system must be taken into account when furnishing the rooms, always favoring heat dissipation and avoiding overheating of the floor.
6. Open joints may appear during the heating season. The installation of chrono-thermostats in different rooms should be done in a way that the radiant heating system operating stably does not generate temperature gradients of more than 5°C between different rooms.
7. The assembly (Finfloor laminate flooring + underlay) must have a total thermal resistance value  $R_{t} \leq 0.15 \text{ m}^2\text{K/W}$ .
8. The most suitable underlay for the installation of Finfloor with a heating system is the one with the lowest thermal resistance.

**Finfloor**

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