

## INSTALLATION OVER UNDERFLOOR HEATING

Wood flooring is a natural product and will react completely and only to the environment it is subjected to. If a wood floor is to live in harmony with underfloor heating, a constant environment must be maintained.

**Water-based underfloor heating systems are normally installed within one of two different screeds;**

1. Sand and cement **OR**
2. Anhydrite/Calcium sulphate

**Note:** the installation guidelines are very different, so you must find out which type of subfloor you are installing over. If you don't know, ask the subfloor supplier/contractor for a specification.

## INSTALLATION OVER A SAND AND CEMENT BASED SUBFLOOR

- The maximum finished floor temperature should never exceed 27°C. **Note:** a thinner wood floor will allow easier and more cost effective heat transfer and is most efficient when fully bonded to the subfloor.
- The underfloor heating system should be a water-based system. Electric based systems may develop extreme temperatures when covered up.
- If gluing down, we recommend Canadia Flexifloor 920. If a Liquid Damp Proof Membrane (LDPM) is not being used, the moisture content in the concrete should be below 3% (MC).
- If floating, TUPLEX underlay must be used and the concrete moisture must be below 3% (MC). **Note:** to get an accurate moisture reading, the heating system should be off for 48hrs.
- Keeping a stable Relative Air Humidity (RH) is essential. A recommended RH of between 45% and 65% should be maintained. It is recommended a wall hygrometer is used to ensure this can be monitored. The combination of a low RH and an excessive temperature in the screed creates a non sustainable environment for a wood floor.
- The warm water tubing needs to be installed in a fine or medium distance pattern, not exceeding a distance between the tubes of 500 mm.
- To avoid damage to the subfloor and the wooden floor, make sure that the start-up protocol of the underfloor heating is followed and respected.
- The underfloor heating system has to be installed and in operation for a minimum of 7 days. During this time, it needs to be fully tested for leaks and heat transfer before installation of the wooden floor takes place.
- Prior to the installation of the wooden floor, the wood must be allowed to acclimatise in the building under normal living conditions (heating and ventilation) for a minimum of 7 days.
- Prior to the installation of the wooden floor, the underfloor heating transfer temperature must be decreased to 14-16°C. After the glue has fully cured, the heating can be turned up by 1°C per day to normal operation temperature.
- Canadia strongly recommends using a qualified installer with experience of installation over underfloor heating systems.

## **INSTALLATION OVER AN ANHYDRITE/CALCIUM SULPHATE SUBFLOOR**

- The maximum finished floor temperature should never exceed 27°C. **Note:** a thinner wood floor will allow easier and more cost effective heat transfer and is most efficient when fully bonded to the subfloor.
- The underfloor heating system should be a water-based system. Electric based systems may develop extreme temperatures when covered up.
- If gluing down, we recommend Canadia Flexifloor 920. The moisture content in the screed must be below 3% (MC) on the Tramex and hydrate scale.
- Don't use a Liquid Damp Proof Membrane (LDPM) over an anhydrite/calcium sulphate screed.
- If floating, TUPLEX underlay must be used. The moisture content in the screed must be below 3% (MC) on the Tramex and hydrate scale. **Note:** to get an accurate moisture reading, the heating system should be off for 48hrs.
- Keeping a stable Relative Air Humidity (RH) is essential. A recommended RH of between 45% and 65% should be maintained. It is recommended a wall hygrometer is used to ensure this can be monitored. The combination of a low RH and an excessive temperature in the screed creates a non sustainable environment for a wood floor.
- The warm water tubing needs to be installed in a fine or medium distance pattern, not exceeding a distance between the tubes of 500 mm.
- To avoid damage to the subfloor and the wooden floor, make sure that the start-up protocol of the underfloor heating is followed and respected.
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- Prior to the installation of the wooden floor, the underfloor heating transfer temperature must be decreased to 14-16°C. After the glue has fully cured, the heating can be turned up by 1°C per day to normal operation temperature.
- Canadia strongly recommends using a qualified installer with experience of installation over underfloor heating systems.

### **Note: Canadia cannot be and is not responsible for;**

- The underfloor heating system meeting the required criteria for use under wood flooring.
- The underfloor heating system being installed as per manufacturers guidelines.
- The Canadia floor being installed as per recommended guidelines.
- After installation of the wood floor, the strict above guidelines for heating use are adhered to.