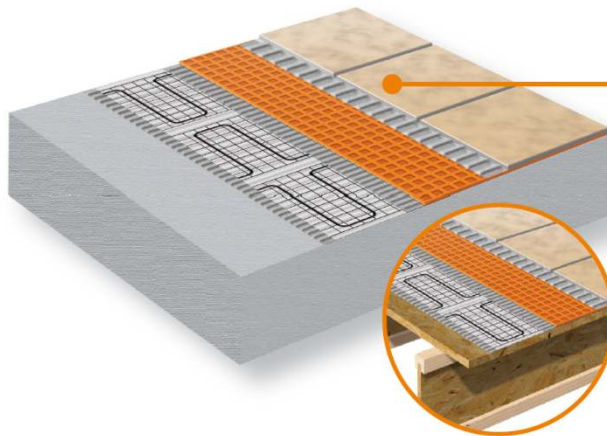


Product Application Guide: Schlüter®-DITRA 25 with Electric Undertile Heating

Electrical undertile heating has become popular with the installation of ceramic and natural stone floor tiles. The low thermal resistivity of ceramic and stone tiles allows them to be used with undertile heating without sacrificing the energy efficiency of the system. However, there are inherent challenges in combining rigid surface coatings with heating systems. A viable installation system must address the magnified fluctuations in temperature that contribute to increased shear stresses between the heated assembly and tile covering. The system must also limit thermal loss by promoting even heat distribution and protect the assembly from moisture ingress in wet areas.

Our preferred method of installation uses Schlüter®-DITRA 25 above the electrical undertile heating assembly. This allows the uncoupling function of Schlüter®-DITRA 25 to be at its most optimum and where required provide waterproof protection to the substrate and electrical assemblies. The air channels on the underside of Schlüter®-DITRA 25 allow for a quick and even distribution of heat below the tile covering, therefore Schlüter®-DITRA 25 does not act as an insulation layer.



For installations below Schlüter®-DITRA, follow the heating manufacturer's instructions for fixing their mat/wire system to the substrate, then apply a levelling layer over the top of the wires with suitable adhesive or levelling compound. Once this has set, apply the Schlüter®-DITRA, adhering with a cementitious tile adhesive in the normal way.

Areas of application:

- Over timber, screed or concrete substrates that are even and structurally sound.
- Interior dry or wet areas according to heating supplier's recommendations.

Limitations:

- Minimum tile format 50 mm x 50 mm
- Tile thickness of less than 6 mm.
- Not suitable where an insulated tile backerboard is used beneath the heating cables.
- Check compatibility of resin agglomerate tiles with supplier.
- Heating system can be turned on 7 days following the grouting process, follow the heating supplier's directions.
- The adhesive layer over Schlüter®-DITRA 25 should not exceed 10 mm.

Requirements:

- Timber substrates must be constructed in line with the tiling codes of practice BS 5385-3
- Screed substrates should be installed in accordance with the relevant part of BS 8204
- Ensure all tiles are solidly bedded and no voids are present.

Substrate Preparation:

- Any levelling of the assembly must be carried out prior to installing Schlüter®-DITRA 25
- Additional preparation according to heating supplier.

Movement Joints:

- Schlüter®-DITRA 25 does not eliminate the need for movement joints, these should be installed in accordance with BS 5385 and industry guidelines.
- Movement joints should be installed at tiling perimeters and where tiling meets restraining surfaces.
- Where the floor incorporates underfloor heating, the floor should be divided into bays up to 40 square metres with a maximum length of 8 metres.
- Where resin agglomerate tiles are used the floor should be divided into bays of up to 25 square metres.

Setting and Grouting Materials:

- Appropriate cementitious tile adhesive conforming to BS EN 12004: 2007
- Appropriate cementitious grout conforming to BS EN 13888: 2002
- Where large format tiles are used the 'floating and buttering' technique is advised. This requires the back of the tiles to be skimmed with adhesive to give an even surface, then immediately installed into a fresh ribbed adhesive bed, ensuring that as far as practically possible, no voids remain under the tiles.
- Certain moisture sensitive tiles will need special consideration – see Other Considerations.

Other Considerations:

- Install electric cable system as per supplier's directions; encapsulating the cables in a skim coat of self levelling compound (SLC), ensure the SLC is appropriate for the substrate and application. Allow the SLC to cure prior to the Schlüter®-DITRA 25.
- Where a waterproof floor is required, all Schlüter®-DITRA 25 joints and perimeter connections be sealed with Schlüter®-KERDI-KEBA and [Schlüter®-KERDI-COLL](#), as per our standard recommendations.
- Certain moisture sensitive stones, e.g. agglomerate stone or resin backed tiles, may require special setting materials, please consult the stone supplier and Schlüter-Systems for more information.

Additional Resources:

- BS 5385-3, BS 5385-4 & BS 5385-5
- The Tile Association publication – Tiling to Heated Floors
- The Tile Association publication – Movement Joints in Internal Tiling
- Stone Federation Great Britain – Natural Stone Flooring
- BS 8000-11 Workmanship on building sites.

For project specific guidance and recommendations please consult our Technical Department:

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