

Schlüter®-DITRA-HEAT

Installation membrane

Uncoupling, waterproofing, floor and wall heating

6.4

Product data sheet

Application and function

Schlüter-DITRA-HEAT is a polypropylene membrane with a cut-back stud structure and an anchoring fleece laminated on the underside. It is a universal substrate for tile coverings, which serves as an uncoupling, crack bridging, waterproofing, vapour pressure equalisation layer and is designed for the attachment of heating cables.

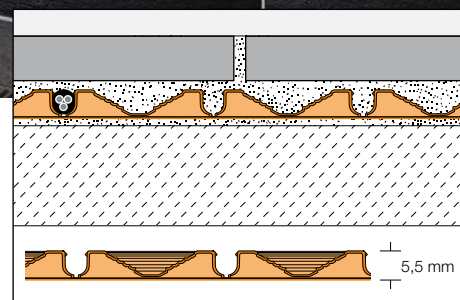
Schlüter-DITRA-HEAT-DUO features a 2 mm special anchoring fleece on the underside, which bonds with the adhesive, while also reducing impact sound and enabling a faster heat-up response. The substrate for the installation of DITRA-HEAT must be level and ready to bear weight. Schlüter-DITRA-HEAT is installed in thin-bed adhesive suitable for the substrate with a notched trowel (recommended size: 6 x 6 mm). The anchoring fleece on the underside of DITRA-HEAT is then fully embedded in the adhesive to ensure a mechanical bond of the fabric in the adhesive. The curing window of the adhesive has to be taken into consideration. In floor areas, the heating cables can be installed immediately after adhering DITRA-HEAT matting with a minimum spacing of 9 cm (every third stud = 136 W/m²).

In the case of wall installation, the heating cables are installed once an adequate adhesive bond has been reached. Installers can choose between installation spacing of 6 cm (every second stud = 200 W/m²) and 9 cm (every third stud = 136 W/m²).

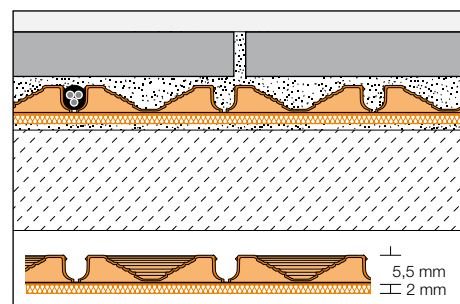
The use of mats is recommended for wall areas. The tile or stone covering is professionally installed directly over DITRA-HEAT membrane in accordance with the applicable standards. The bedding adhesive anchors with the cut-back stud structure of the DITRA-HEAT membrane.



Schlüter-DITRA-HEAT / -HEAT-DUO is waterproof and can withstand all chemical stresses that typically occur in conjunction with tile coverings. Where required, an approved bonded waterproofing assembly can be created with DITRA-HEAT / -HEAT-DUO in specific areas.



Schlüter®-DITRA-HEAT



Schlüter®-DITRA-HEAT-DUO





Material

Schlüter-DITRA-HEAT is a polypropylene membrane with a cut back stud structure and imprinted Easycut gridlines. A fleece fabric is laminated on the underside. The product thickness, including the stud structure, is approx. 5.5 mm or approx. 7.5 mm in the case of DITRA-HEAT-DUO.

Polypropylene is not UV-stable in the long term; the product should not be stored in places with prolonged exposure to direct sunlight.

Material properties and areas of application:

Schlüter-DITRA-HEAT is non-rotting, waterproof, elastic and crack-bridging. The material is highly resistant to solutions containing salts, acids and alkalis, as well as many organic solvents, alcohols and oils. The suitability of the material must be verified based on the specific chemical stresses, including the anticipated concentration, temperature and length of exposure. The water vapour diffusion seal of the material is relatively high. The material is physiologically safe. In special cases, the suitability of the material must be verified based on the anticipated chemical and mechanical stresses. The information provided below is intended as a general guideline.

Due to the special characteristics of the system, coverings installed over DITRA-HEAT may have a certain hollow sound when they are walked upon with hard shoes or tapped with a hard object. The use of DITRA-HEAT in conjunction with heating cables for floor/wall heating is only approved for interior areas.

Note

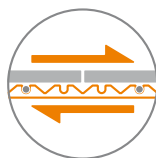
The adhesive and the covering materials used in conjunction with DITRA-HEAT must be suitable for the corresponding application and meet the applicable requirements. If installing covering materials that are sensitive to moisture (e.g. natural stone or synthetic resin panels) or in the case of moisture underneath the covering (e.g. from green screeds), it is recommended to trowel the sealing adhesive Schlüter-KERDI-COLL-L over the joints of DITRA-HEAT and to cover the joints with the 12.5 cm wide sealing band Schlüter-KERDI-KEBA.

The use of fast-setting thin-bed adhesive may be an advantage for specific projects. It is recommended to lay out timber boards over pathways, e.g. for material transport, to protect DITRA-HEAT.

Notes regarding movement joints:

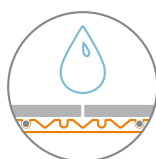
The installation membrane DITRA-HEAT must be separated above existing movement joints. Heating cables may not be installed over movement joints. In accordance with the applicable construction standards, movement joints must be continued in the tile covering. Coverings made of large format tiles over DITRA-HEAT must be divided into fields with movement joints in accordance with the applicable regulations. We recommend the use of our Schlüter-DILEX profiles. Depending on the anticipated movements, profiles such as Schlüter-DILEX-BT or Schlüter-DILEX-KSBT should be installed over structural movement joints. The build-up of tensions must be addressed at the edge of coverings, for example at upright construction elements or floor-wall transitions. The edge joints and connection joints must meet the applicable professional regulations. Their dimensions must be sufficient to rule out the build-up of tensions. We recommend the use of our various profile types of the Schlüter-DILEX series.

Summary of functions:



a) Uncoupling

Schlüter-DITRA-HEAT uncouples the covering from the substrate and neutralises stresses between the substrate and the tile or stone covering that result from different deformation processes. The material effectively bridges tension cracks from the substrate and ensures that they are not transferred to the tile covering.



b) Waterproofing

Schlüter-DITRA-HEAT / -HEAT-DUO is a waterproof polypropylene membrane with a relatively high water vapour diffusion seal. When properly installed at the abutting joints as well as at wall transitions and connections to building components, DITRA-HEAT / -HEAT-DUO can form part of an approved bonded waterproofing assembly with the tile covering. Schlüter-

DITRA-HEAT / -HEAT-DUO can be used in accordance with the German waterproofing standard DIN 18534. Water exposure classes: W0-I to W3-I*. Furthermore, DITRA-HEAT / -HEAT-DUO features the national technical approval (abP) required in Germany.

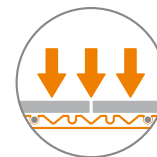
Moisture load class according to ZDB: 0 to B0 and A.

Schlüter-DITRA-HEAT / -HEAT-DUO has a European Technical Assessment (ETA) in accordance with EAD 030436-00-0503, a certificate of technical approval for the German market (abP) and bears a CE mark. It must be ensured that only system approved thin-set tile adhesives are used in areas that require CE conformity or compliance with the general certificate of national technical approval. Please contact the address specified in this data sheet for further information on suitable thin-set tile adhesives and the corresponding test certificates.

The waterproofing system DITRA-HEAT / -HEAT-DUO effectively protects the substructure from damage caused by permeating moisture or aggressive substances.

* With abP and/or based on ETA according to EAD 030436-00-0503.

The Technical Department is available to provide information on use and installation on request.



c) Load distribution (load induction)

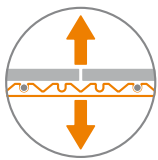
Tiles that are installed in floor areas over DITRA-HEAT should at a minimum have a size of 5 x 5 cm and a thickness of 5.5 mm. The indentations of DITRA-HEAT with their tile adhesive filling transfer the traffic loads impacting the tile covering directly to the substrate. This makes tile coverings installed over DITRA-HEAT especially durable. If high traffic loads are expected (e.g. in commercial areas) or if the floor must accommodate large point loads (such as grand pianos, fork lifts, shelf systems), the selected tiles must feature the necessary thickness and pressure stability for the corresponding application area. In Germany, the guidelines of the information sheet "Ceramic floor coverings for high mechanical impact" must be observed for tile thicknesses.

Tiles must be fully embedded in the tile adhesive in areas with high traffic loads. Please note that the contact surface of DITRA-HEAT is approximately 50% of the entire area, which may cause a correspon-



ding reduction in pressure resistance in the presence of high point loads. Schlüter-DITRA-HEAT-DUO features a special 2 mm anchoring fleece on the underside and can be used for traffic loads up to 3 kN/m². This includes residential and commercial premises with light foot traffic (residential buildings, office and administrative spaces, restaurants, hotels, conference rooms, nursing stations and patient rooms etc.)

As a rule, the impact of hard objects must be avoided on ceramic coverings for both DITRA-HEAT and DITRA-HEAT-DUO. Tiles should have minimum dimensions of 5 x 5 cm.



d) Bonded assembly

Due to the bond of the fleece fabric with the thin-bed adhesive over the substrate and the mechanical anchoring of

the thin-set adhesive in the cut-back stud structure, DITRA-HEAT creates a lasting bond of the tile covering with the substrate. Schlüter-DITRA-HEAT can therefore be used in wall and floor areas.



e) Thermal separation

Schlüter-DITRA-HEAT-DUO features a 2 mm special anchoring fleece on the underside, which bonds with the tile adhesive, while also reducing impact sound and enabling a faster heat-up response.



f) Sound insulation

An impact sound insulation improvement (ΔLW) of 13 dB was measured in a full installation of DITRA-HEAT-DUO (in

accordance with DIN EN ISO 10140).

However, the actual impact sound reduction of an assembly depends on local circumstances (construction system) and may differ from this value. Consequently, the determined test values cannot be applied generally to all construction site situations.

Substrates for Schlüter®-DITRA-HEAT:

Always check the substrates on which DITRA-HEAT is to be installed to make sure they are level, load-bearing, clean and compatible with the materials to be used. Remove all surface components that may weaken the bond. Uneven or sloping areas must be levelled prior to the installation of DITRA-HEAT. To guarantee the effective heating of the floor, thermal insulation must be included in all installations directly above the ground or over unheated rooms. For a faster heat-up response, we recommend the installation of DITRA-HEAT-DUO with its thermal break property over unheated screed assemblies or the use of Schlüter-KERDI-BOARD as an insulation layer (see data sheet 12.1).

Concrete

Concrete is subject to long-term form changes due to curing processes. Additional tensions may result from the deflection of concrete and pre-stressed concrete. Schlüter-DITRA-HEAT uncouples the tensions between the concrete and the tile covering, which means that tiles can be installed as soon as the concrete reaches a sufficient level of stability.

Cementitious screeds

In accordance with the applicable regulations, cementitious screeds must be at least 28 days old and have a residual moisture level below 2 CM% before tiles can be installed. However, floating screeds and heated screeds are particularly prone to curling and cracking, for example because of weight loads and temperature fluctuations. With DITRA-HEAT, tiles can be installed on green cementitious screeds as soon as they are ready to bear weight.

Cracks and buckles forming in the screed at a later time will be neutralised by DITRA-HEAT and will not be transferred to the tile covering.

Gypsum screeds

According to the applicable rules, just testing gypsum screeds may only have a residual moisture level of max. 0.5 CM% when the tiles are installed. When DITRA-HEAT is used, the tile covering is ready to be installed as soon as the residual moisture level drops below 2 CM%. If necessary, treat the screed surface as recommended

by professional standards and manufacturer instructions (sanding, priming). Schlüter-DITRA-HEAT can be installed with suitable thin-bed tile adhesive. Schlüter-DITRA-HEAT protects the screed against permeating moisture at the surface. Gypsum screeds are sensitive to moisture, making it necessary to protect the screed from further moisture, e.g., high humidity.

Heated screeds

Schlüter-DITRA-HEAT may also be installed over heated screeds, with the above material notes to be observed (cement, gypsum). When DITRA-HEAT is used, the covering assembly may be heated up as early as 7 days after completion. Starting from 25 °C, increase the supply temperature by a maximum of 5 °C a day to reach an operating temperature of max. 40 °C.

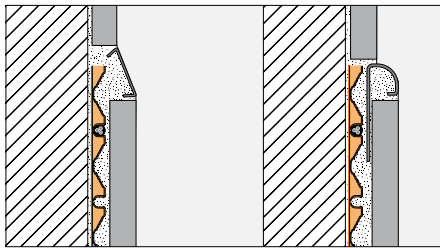
Note:

The use of DITRA-HEAT over heated screeds allows for individual, partial warming that is separate from the central heating system. That allows for completely switching off the central heating system during seasonal transition periods. Schlüter-DITRA-HEAT can also help cover peak loads.

Due to the thermal separation property of Schlüter-DITRA-HEAT-DUO, it is not recommended for use on heated screeds.



Installation variant: Wall edging profile
Schlüter®-QUADEC



Installation variants: Wall edging profiles
Schlüter®-DESIGNLINE Schlüter®-RONDEC

Note for installing DITRA-HEAT in wall areas:

To mark the heated wall space (and avoid inadvertent drilling into a heating cable), we recommend using Schlüter profiles to visually outline the corresponding area (see details above).

In the case of heated wall areas exceeding a length of 3 m, the wall and connection joints must have a permanently elastic design to accommodate thermal expansion.

Vinyl coverings and coatings

All surfaces must be load bearing and pre-treated or suitable for bonding with an appropriate adhesive, in which the DITRA-HEAT anchoring fleece can be embedded. The compatibility of the adhesive with the substrate and with DITRA-HEAT must be verified in advance.

Plywood, chipboard and other suitable flooring panels and boards

These materials undergo significant deformation based on the influence of moisture (or through fluctuations in humidity). Therefore, chipboard and compressed wood panels with special water-repellent treatment to protect against moisture must be used.

Such panels can generally be used as a floor and wall substrate in interior spaces. Refer to local regulations if these are acceptable. However, they have to be thick enough to be sufficiently stable in conjunction with a suitable support assembly.

The structure should be fastened with closely spaced screws. Abutments must have a tongue and groove connection and be fully sealed. Perimeter movement joints of about 10 mm have to be maintained at the transition to upright building structures. DITRA-HEAT neutralises any tensions with the tile covering and also prevents permeating moisture.

Hardwood floors

In principle, ceramic coverings can be installed on sufficiently weight bearing hardwood floors with tongue and groove connections. The wooden substrate should have balanced moisture levels before DITRA-HEAT can be installed. It has proven beneficial to install an additional layer of chipboard or compressed wood panels. Uneven floor surfaces should be levelled with suitable measures beforehand.

Masonry / mixed substrates

Masonry structures built with bricks, sand lime bricks, cement blocks, aerated concrete or similar materials are generally a suitable substrate for DITRA-HEAT. The substrate must be levelled in advance. In restoration and remodelling projects, substrates frequently consist of mixed materials, which have a tendency to crack at the interfaces with other materials due to different deformation rates. DITRA-HEAT protects the tile covering from the resulting tensions and cracks.

Gypsum plaster / bricks

Gypsum substrates should be completely dry in accordance with the relevant regulations. The surfaces may need to be pre-treated with a primer. DITRA-HEAT can be installed with dry-setting or other suitable thin-bed mortars.

Installation

1. The substrate must be free of components that may inhibit bonding, load bearing and levelling. Any necessary levelling work must be completed before installing DITRA-HEAT.
2. The selection of the adhesive for installing DITRA-HEAT depends on the substrate.

The adhesive must bond with the substrate and mechanically attach to the DITRA-HEAT anchoring fleece. A dry setting thin-bed mortar can be used for most substrates. The adhesive should preferably have a consistency suitable for fluid beds. Review any potential material incompatibilities beforehand. If using covering materials with a side length ≥ 30 cm, we recommend a quick-setting tile adhesive with crystalline water-binding capacity for fast curing and drying if the mortar.

3. Apply a suitable adhesive on the substrate with a notched trowel (6 x 6 mm). To achieve better initial adhesion for installation in wall areas, we recommend applying a contact layer on the reverse side of DITRA-HEAT.
4. Embed the DITRA-HEAT mats, which must have been cut to size beforehand, into the installed adhesive, the anchoring fleece facing down, and immediately press them in place with a float or roller, working in a single direction. The curing time of the adhesive must be observed. For efficient installation of product rolls, precisely align DITRA-HEAT and keep the material tightly stretched with light tension when placing it on the substrate. The Easycut gridlines minimise the curling memory. Mats are recommended for wall applications for easier handling. The mats or membranes are installed with closely abutting joints.
5. To prevent any damage to the installed DITRA-HEAT or detachment from the substrate, it is recommended to protect the area from mechanical stresses, e.g. by setting out running boards (particularly in the centre areas used for material transport).



re 3.



re 4.



re 6a.



re 6b.



re 6b.



re 7.

Installation of electrical Schlüter-DITRA-HEAT-E components

(See Data sheet 6.6)

Heating cable installation

- 6a. For installation in floor areas, heating cables may be installed immediately after adhering the uncoupling mat DITRA-HEAT, using a float or roller. For wall installation, the heating cables are installed once an adequate adhesive bond has been reached. Heating cables must never touch or overlap each other.
- 6b. Create a corresponding indentation in the area of the sealed cable end.

Note: Before embedding the sensors with thin-bed mortar, measure the resistance values, e.g. with the cable tester Schlüter-DITRA-HEAT-E-CT, and compare them with the values listed in the thermostat installation instructions.



Schlüter®-DITRA-HEAT-E-CT cable tester

7. The transition from the heating cable to the connection pipe (fitting) is marked with an imprint as shown. The fitting also bears a sticker that reads "Connection". The connection pipe is labelled with the imprinted marking "COLD" further on. This cold conductor (4 m) must be installed directly in a junction box or connected to the thermostat. The cold conductor may be shortened to a max. length of 1.00 m before the fitting. The heating cables may not be shortened.

The electrical installation must be performed by a qualified electrician (EN 60335-1).

Note: Further information on installing the temperature sensor, heating cables and installing and setting up the thermostat can be found in the respective installation instructions included with the heating cable or thermostat, or the data sheet 6.6 Schlüter-DITRA-HEAT-E.

Installation on ceramic coverings:

8. After installing and checking the heating cables as specified in the installation instructions for DITRA-HEAT-E, the tiles can be installed in the thin-set method, using a thin-bed mortar that meets the requirements of the respective covering. For maximum efficiency, fill the indentations of the uncoupling mat with the smooth side of a notched trowel (heating cable and fittings must be completely embedded within the tile adhesive) and groove the thin-bed tile adhesive with the notched side of the trowel to prepare for tile installation. The notch size of the trowel must match the tile size to completely embed the tiles in the thin-bed tile adhesive. Observe the curing time of the adhesive.
9. Follow the instructions in this data sheet to install movement joints for perimeter, edge and connection joints.



Edge connection with Schlüter®-DILEX-RF

Note: The thin-bed mortar and the coverings used in conjunction with DITRA-HEAT must be suitable for the respective application area and meet the corresponding requirements. Wait at least 7 days after completing the covering assembly to heat up the DITRA-HEAT-E system for the first time

**Installation on non-ceramic coverings:**

Non-ceramic coverings such as wooden parquet, vinyl, PVC coverings etc. may be installed over DITRA-HEAT / -DUO, both as floating coverings, including sound insulation, or as directly adhered coverings. The maximum thermal conductivity resistance of the upper floor covering, including a possible impact sound insulation, of $R_{lmax} = 0.15 \text{ m}^2 \text{ K/W}$ should not be exceeded. The manufacturer instructions for the corresponding covering must be observed.

Please consult our Technical Department before using non-ceramic coverings in conjunction with DITRA-HEAT/-DUO.

- Install the DITRA-HEAT / -DUO matting and the heating cable as described above.
- Apply a low-stress levelling compound and filler that is suitable for an electrical floor heating system over the entire area in such a way that the gaps between the studs are completely filled and the heating cable and the pipe penetration sleeves are fully embedded.
- It must be guaranteed that the heating cable and the studs are covered with at least 5 mm of the levelling compound. To ensure enhanced distribution and a more even surface, we recommend a coverage of at least 8–10 mm. A larger coverage also improves the load transfer in case of soft floor coverings (e.g. vinyl flooring) and results in more even heat distribution.
- The upper floor coverings can be installed according to the manufacturer instructions once the levelling compound has sufficiently cured.

Note:

- Set the digital thermostats Schlüter-DITRA-HEAT-E to "Soft floor" to limit the maximum floor sensor temperature to 28°C. If the manufacturer of the respective upper floor covering specifies different temperatures, these must be reflected in the settings.

Waterproofing**with Schlüter®-DITRA-HEAT**

DITRA-HEAT can be used to create certified waterproofing assemblies with tile coverings, provided the abutting membrane joints and the connections to installed components and upright building structures are carefully sealed.

DITRA-HEAT also features the national technical approval (abP) required in Germany and has an Ü-mark quality seal for construction products. Moisture load class according to abP: 0 - B0 and A.

Schlüter-DITRA-HEAT has a European Technical Assessment (ETA) pursuant to ETAG 022 (watertight covering kits) and bears a CE mark. Moisture load class according to ETAG 022: A.

System-certified tile adhesives must be used in areas that require CE-compliance or assemblies according to abP (certificate of technical approval).

Please contact us at the address listed in this data sheet for further information about thin-bed mortars and the corresponding certificates of technical approval.

Schlüter-DITRA-HEAT protects the substrate from damage caused by permeating moisture and aggressive substances. For seam sealing, trowel the sealing adhesive Schlüter-KERDI-COLL-L over the abutting joints and fully embed Schlüter-KERDI-KEBA in a minimum width of 12.5 cm over the joint.

To waterproof floor-wall transitions, adhere KERDI-KEBA over DITRA-HEAT on the floor and directly on the substrate in wall areas in the corresponding width. The sealing band must have a coverage of at least 5 cm. KERDI-KEBA can also be used to create functional connections to fixed structural components such as door and window frames made of metal, wood or plastic.

The first step is to apply Schlüter-KERDI-FIX to the adhesive surfaces of the structural elements. The remaining width is then adhered to DITRA-HEAT with KERDI-COLL-L.



Joint sealing with Schlüter®-KERDI-KEBA

The suitability of KERDI-FIX for the respective materials of the structural elements must be verified in advance. Separate DITRA-HEAT at existing movement joints or structural movement joints and seal the abutting joints with Schlüter-KERDI-FLEX. Never run heating cables over expansion joints or dummy joints.

KERDI-FLEX should also be used for flexible finishing edges. As an alternative, this can also be done with a sufficient loop of KERDI-KEBA.

Note on floor drains:

Schlüter-KERDI-DRAIN and Schlüter-KERDI-LINE are drainage systems specially designed for connection to bonded waterproofing assemblies. Schlüter-DITRA-HEAT can quickly and safely be combined with these components by using pre-fabricated KERDI collars.

Thermostat:

The heating cables of the DITRA-HEAT system may only be operated with DITRA-HEAT-E thermostats.

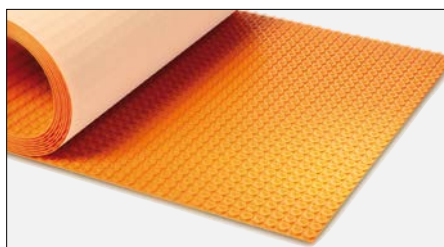




Permitted installation spacing of heating cables for Schlüter-DITRA-HEAT/DITRA-HEAT-DUO

	9 cm = 3rd stud	6 cm = 2nd stud	3 cm = every stud
Floor			
DITRA-HEAT-E-HK	△ 136 W m ²	unzulässig	unzulässig
DITRA-HEAT-E-CHC	△ 80 W/m ²	unzulässig	unzulässig
Wall			
DITRA-HEAT-E-HK	△ 136 W m ²	△ 200 W/m ²	unzulässig
DITRA-HEAT-E-CHC	△ 80 W/m ²	△ 120 W m ²	unzulässig

Product overview:



Schlüter®-DITRA-HEAT-MA Mat

DITRA-HEAT-MA
0.80 x 0.98 m = 0.78 m²

Schlüter®-DITRA-HEAT Roll

DITRA-HEAT
12.76 x 0.98 m = 12.5 m²



Schlüter®-DITRA-HEAT-DUO-MA Mat

DITRA-HEAT-DUO-MA
0.80 x 0.98 m = 0.78 m²

Schlüter®-DITRA-HEAT-DUO Roll

DITRA-HEAT-DUO
10.2 x 0.98 m = 10.0 m²



Sets for floor and wall surfaces

Schlüter®-DITRA-HEAT-E-S

contains:

- Touchscreen thermostat Schlüter-DITRA-HEAT-E-R (Colour brilliant white)
* or 'Smart' touchscreen thermostat with voice and WiFi control
- Heating cable Schlüter-DITRA-HEAT-E-HK for the area to be heated (installed around every 3rd stud \triangleq 136 W/m²)
- Uncoupling mats Schlüter-DITRA-HEAT-MA
- 2 junction boxes
- 1 x conduit (3 m)



Schlüter®-DITRA-HEAT-E set

Wall installation sets

Schlüter®-DITRA-HEAT-E-WS

contains:

- Touchscreen thermostat Schlüter-DITRA-HEAT-E-R (Colour brilliant white)
* or 'Smart' touchscreen thermostat with voice and WiFi control
- Heating cable Schlüter-DITRA-HEAT-E-HK for the area to be heated (installed around every 2nd stud \triangleq 200 W/m²)
- Uncoupling mats Schlüter-DITRA-HEAT-MA
- 2 junction boxes
- 1 x conduit (3 m)

Schlüter®-DITRA-HEAT-E-S

Complete floor and wall installation set

Schlüter®-DITRA-HEAT-MA		Schlüter®-DITRA-HEAT-E-HK	Art.-No.	Art.-No.*
Number of mats	Uncoupled area in m ²	Heated area in m ² 136 W/m ²		
4	3.1	2.2	DH S3	DH RT6 S3
7	5.4	3.8	DH S1	DH RT6 S1
10	7.8	5.5	DH S2	DH RT6 S2

Schlüter®-DITRA-HEAT-E-WS

Complete wall installation set

Schlüter®-DITRA-HEAT-MA		Schlüter®-DITRA-HEAT-E-HK	Art.-No.	Art.-No.*
Number of mats	Uncoupled area in m ²	Heated area in m ² 200 W/m ²		
4	3.1	2.6	DH WS1	DH RT6 WS1
3	2.3	1.8	DH WS2	DH RT6 WS2



Sets for wall and floor areas with thermal barrier

Schlüter®-DITRA-HEAT-E-DUO-S

contains:

- Touchscreen thermostat Schlüter-DITRA-HEAT-E-R (Colour brilliant white)
* or 'Smart' touchscreen thermostat with voice and WiFi control
- Heating cable Schlüter-DITRA-HEAT-E-HK for the area to be heated (installed around every 3rd stud $\triangleq 136 \text{ W/m}^2$)
- Uncoupling mats Schlüter-DITRA-HEAT-DUO-MA
- 2 junction boxes
- 1 x conduit (3 m)



Schlüter®-DITRA-HEAT-E-DUO set

Sets for wall areas with thermal barrier

Schlüter®-DITRA-HEAT-E-DUO-WS

contains:

- Touchscreen thermostat Schlüter-DITRA-HEAT-E-R (Colour brilliant white)
* or 'Smart' touchscreen thermostat with voice and WiFi control
- Heating cable Schlüter-DITRA-HEAT-E-HK for the area to be heated
(installed around every 2nd stud $\triangleq 200 \text{ W/m}^2$)
- Uncoupling mats Schlüter-DITRA-HEAT-DUO-MA
- 2 junction boxes
- 1 x conduit (3 m)

Schlüter®-DITRA-HEAT-E-DUO-S

Complete floor and wall installation set

Schlüter®-DITRA-HEAT-DUO-MA		Schlüter®-DITRA-HEAT-E-HK	Art.-No.	Art.-No.*
Number of mats	Uncoupled area in m ²	Heated area in m ² 136 W/m ²		
2	1,5	1,1	DH D S1	DH D RT6 S1
3	2,3	1,6	DH D S2	DH D RT6 S2
4	3,1	2,2	DH D S3	DH D RT6 S3
5	3,9	2,7	DH D S4	DH D RT6 S4
6	4,7	3,3	DH D S5	DH D RT6 S5
7	5,4	3,8	DH D S6	DH D RT6 S6
8	6,2	4,4	DH D S7	DH D RT6 S7
9	7,0	5,0	DH D S8	DH D RT6 S8
10	7,8	5,5	DH D S9	DH D RT6 S9

Schlüter®-DITRA-HEAT-E-DUO-WS

Complete wall installation set

Schlüter®-DITRA-HEAT-DUO-MA		Schlüter®-DITRA-HEAT-E-HK	Art.-No.	Art.-No.*
Number of mats	Uncoupled area in m ²	Heated area in m ² 200 W/m ²		
4	3,1	2,6	DH D S10	DH D RT6 S10
3	2,3	1,8	DH D S11	DH D RT6 S11

