TECEfloor – universal panel
Technical information

100%
SLQ
Silver Line Quality
Kompatibilität & Qualität

TECE
Intelligente Haustechnik

Contents

Low installation height of 30 mm – ideal for the renovation of old buildings

Simple "one-man assembly"

(1) Polystyrene completely covered with glued aluminium sheets in the factory reduce the assembly steps.

(2) Predetermined breaking joints for width and length adjustment without tools.

(3) Omega pipe guide with flanged edges ensures the pipes hold perfectly and protects pipes from damage.

The sheets can be used with the SLQ-Al/PE-RT floor heating pipe dim. 16.

TECEfloor –
now with universal panel UP

The new universal panel UP is suitable for wall-, ceiling- and floor heating systems, for dry and wet installation as well as for heating and cooling solutions.

- Low installation height of 30 mm (+ top covering) – ideal for renovations
- Low weight permits laying without structural problems
- Optimum heat dissipation through direct covering of parquet and flooring
- High performance at low flow temperature

The panel is designed to be combined with a wide variety of floor coverings. High thermal conductivity of the aluminium sheets glued to the whole surface of the polystyrene ensures a fast response time and optimum distribution of heat.

- Greater comfort in the home thanks to fast response time and fast heat distribution over the entire area
- Saves energy costs as a result of lower flow temperature
- No building moisture, mould or parquet damage through fast floor completion

Technical drawing explanations

- Use in the floor
- Use in the wall
- Use in ceiling
- Use in heating
- Use in cooling
- Surface thickness
- Tile size
- Joint size
- Thermal output in accordance with DIN EN 1264
- Maximum surface temperature (°C)
- Thermal resistance (R)
- Heat transfer coefficient (U)
- Impact sound improvement (dB)
- Dead/material weight (kg/m²) including surface
- Permitted net load (q_k)
- Permitted individual load (Q_k) → supporting surface ≥ 20 cm²
- Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
- Wooden joist ceilings must be torsionally rigid and free of deflection
- Building waterproofing in accordance with DIN 18195
- Glue system elements/material layers together over the complete surface
- Filling for compensation not permitted
- Lay tiles in combined process with MAPEI adhesive Elastorapid and joint mortar Ultracolor Plus
- Thermal insulation
- Additional insulation
- Important information
- Further information

Application area A: Residential areas

EN 1991	EN 1991/NA	SIA 261
✓ A : Rooms in residential buildings, hotel rooms, wards	✓ A2 A3 : Rooms in residential buildings, hotel rooms	✓ A1 : Rooms in residential buildings, hotel rooms, wards

Application area B: Office and working areas

EN 1991	EN 1991/NA		SIA 261
✓ B : Office areas	✓ B1 : Office areas, doctor's practices, wards	✓ D1 : Sales areas up to 50 m² base area	✓ B : Office areas

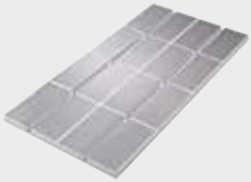
Application area C: Assembly and sales areas

EN 1991	EN 1991/NA	SIA 261	EN 1991	EN 1991/NA	SIA 261	EN 1991/NA	EN 1991/NA	SIA 261
✓ C1 C3	✓ C1 C3	✓ C1 C2	✓ D1	✓ D2	✓ D	✓ E1	✓ B2 B3	✓ C3
Areas in churches, theatres or cinemas, congress rooms, lecture theatres, waiting rooms, museum areas, exhibition areas, entrance areas in public buildings and hotels			Areas in retail stores and department stores			Factories and workshops with light operation	Concert halls, treatment and operation rooms	Sports and games areas

Product data sheets

TECEfloor universal panel UP

Product data



Universal panel UP 250
1000 x 500 x 30 mm (L x W x H)
Art. no. 77 52 00 11

Head element UP 250
(4-way)
1000 x 500 x 30 mm (L x W x H)
Art. no. 77 52 00 13

Head element UP 250 without aluminium (4-way)
1000 x 500 x 30 mm (L x W x H)
Art. no. 77 52 00 23

Compensating element
1000 x 500 x 30 mm (L x W x H)
Art. no. 77 52 00 15

Transition element UP 125-250
(1-way)
250 x 375 x 30 mm (L x W x H)
Art. no. 77 52 00 14

Universal panel UP 125
1000 x 500 x 30 mm (L x W x H)
Art. no. 77 52 00 10

Head element UP 125
(4-way)
1000 x 500 x 30 mm (L x W x H)
Art. no. 77 52 00 12

Head element UP 125 without aluminium (4-way)
1000 x 500 x 30 mm (L x W x H)
Art. no. 77 52 00 22

Edge board UP
1000 x 45 x 30 mm (L x W x H)
Art. no. 77 52 00 16

Edge board door opening UP
250 x 45 x 30 mm (L x W x H)
Art. no. 77 52 00 17

Omega form of pipe channels

Beading of sheet edges

Head elements with aluminium

Prepunched breaking points

Material	Base plate	Polystyrene plate EPS 035 DEO; 240kPa
	Heat conducting plate	Aluminium 0.5 mm, with pipe guides (Omega form), flanged

Data	Thermal conductivity	0.033 W/mK WLG 035
	Thermal resistance	> 0.8 m² K/W
	Vapour diffusion factor	40 in accordance with DIN EN 12086
	Bending strength (N/mm²)	< 0.4 in accordance with DIN EN 12089
	Compression strength	240 kPa at 10 % compression in accordance with DIN EN 826
	Building material class	B1

Prerequisite in accordance with DIN 18202		Inside micrometers as limit values in mm for measuring point intervals in m				
Line	Reference	0.1 m	1 m	4 m	10 m	15 m
4	Ready-to-cover floors with higher requirements, e.g. with self-levelling fillers	1 mm	3 mm	9 mm	12 mm	15 mm

Recommended pipe	Product	Type	Dimension	Art. No.
	 SLQ Al/PE-RT floor heating pipe	TECEfloor	16 x 2 mm	77 15 16 12 77 15 16 30 77 15 16 60

Accessories	Product	Type	L x W x H	Art. No.
	 Load distribution sheet	Steel	800 x 200 x 1 mm	77 52 00 24
	 Edge insulation strip	TECEfloor	25 m x 10 mm x 160 mm	77 62 00 10

Load distribution and separating board

Product data

1150 x 600 x 5 (+0.5) mm (L x W x H)
Art. no. 77 52 00 18

High proportion of aluminium

Load distribution layer for tiles

Load distribution layer for laminate

Material	Base plate	Polyester-fibre plate made of aluminium-clad polyester fleece and thermoplastic binder based on styrene acrylic with high tear resistance and compression strength
Data	Weight	5.2 kg/m² ± 5 %
	Thermal conductivity	0.2 W/mK
	Humidity resistance	Rot-proof
	Vapour diffusion resistance factor	Approx. 30 µ
	Coefficient of linear expansion	2.75 x 10 (exp -5) 1/K
	Thickness increase under effect of temperature (100h, 80°C)	< 0.3 mm
	Thickness increase under effect of water (80h, 23°C)	< 0.5 mm
	Fire behaviour in accordance with DIN EN 13501-1	E(f)
	Impact sound improvement with ceramic top covering (test stand value in accordance with DIN ISO 140- 8:1998, used as a guide)	14 dB with TECEfloor universal panel UP
	Field size	Max. 60 m², length and width ratio max. 2:1
	Waste code	170701
Material releases	Tile formats	Minimum size: 10 x 10 cm or 100 cm², maximum size: 60 x 40 cm, minimum thickness (natural stone): 10 mm
	Joint sizes	Tile format up to 30 x 30 cm = min. 3 mm, 40 x 40 cm = min. 4 mm, 40 x 60 cm = min. 5 mm
	Tile adhesive	Mapei Elastorapid or similar
	Joint mortar	Mapei Ultracolor Plus or similar
	Fixing on heating elements (with tile layer)	Mapei Ecofix or similar

Accessories

Product	Type	Art. No.
 Joint adhesive strip for load distribution and separating board	120 m	77 52 00 19

Hot cutting machine UP

Product data

Hot cutting machine
Art. no. 77 52 00 21

Easy to operate

Precise pipe grooves (16 mm)

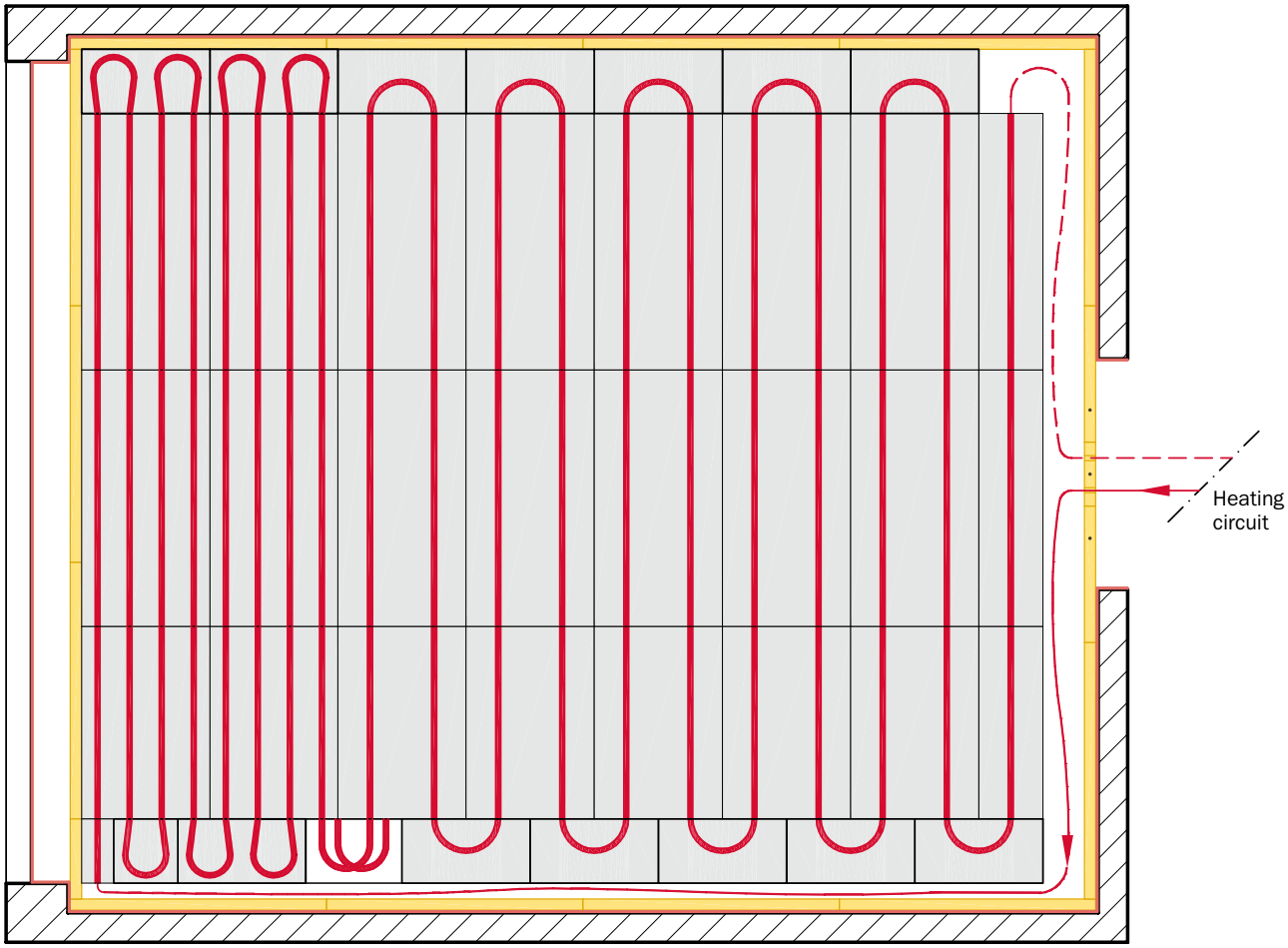
Data

Type	SC-11
Operating voltage	230 V ~ 50-60 Hz
Power input	60 W
Intermittent service	12s ON | 48s OFF
Weight	1025 g
CE mark	Meets the requirements of EU directives: 2004/108/EC and 2006/95/EC

For further information, see the operating instructions.

Sample layout plans

Living room – 1 heating circuit – 17 m²

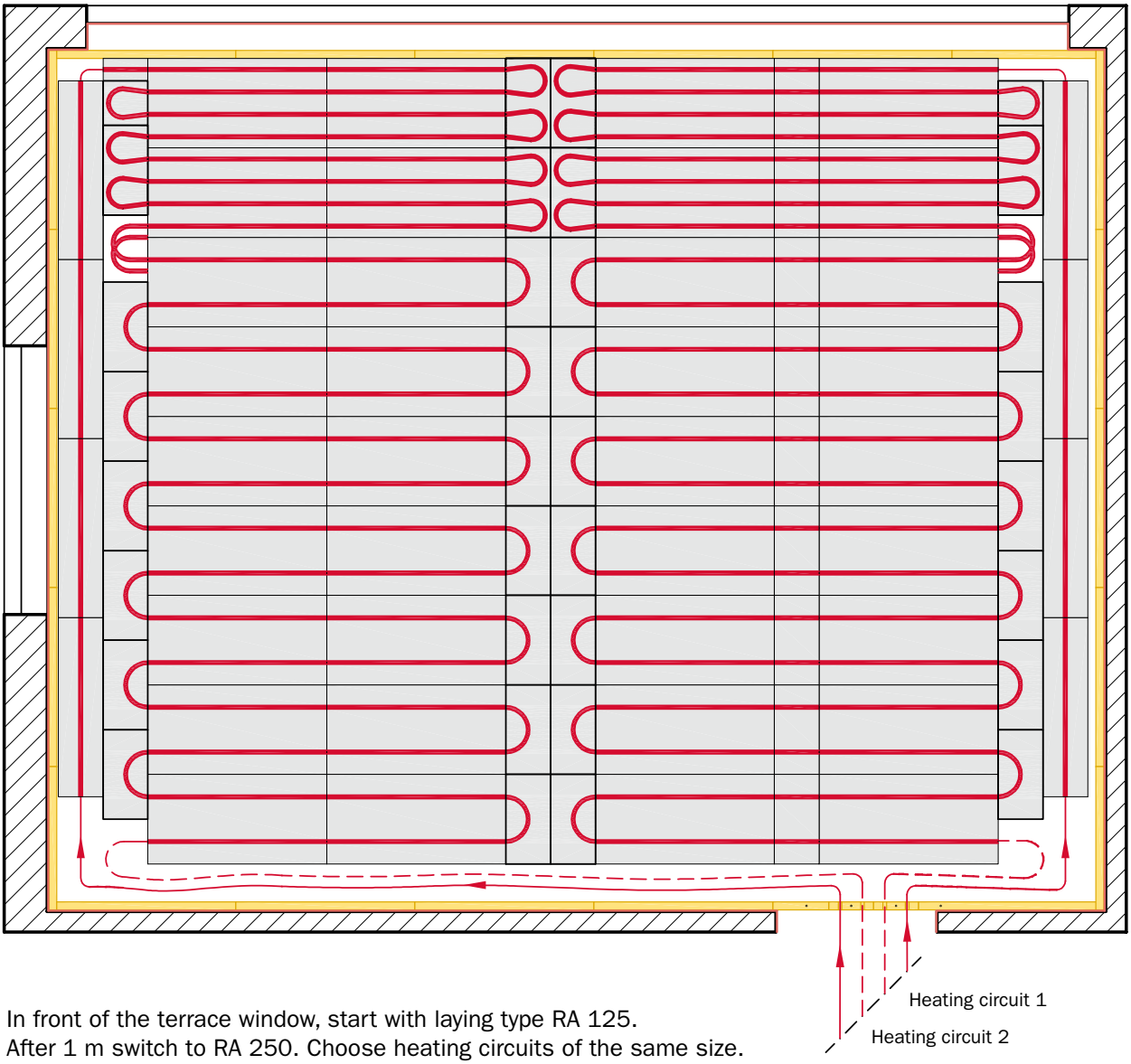


The heating circuit starts in front of the floor-level window with laying type RA 125. After 1 m switch to RA 250. Inlet pipes are cut into the compensating elements in a wave pattern with the hot cutter.

Legend

- Residence zone (RA = 250 mm)
- Edge zone (RA = 125 mm)
- Compensating element
- Head element with aluminium RA 250
- Head element with aluminium RA 125
- Transition element
- Edge board
- Door opening
- Edge insulation strip
- Flow
- Return

Living room – 2 heating circuits – 28 m²

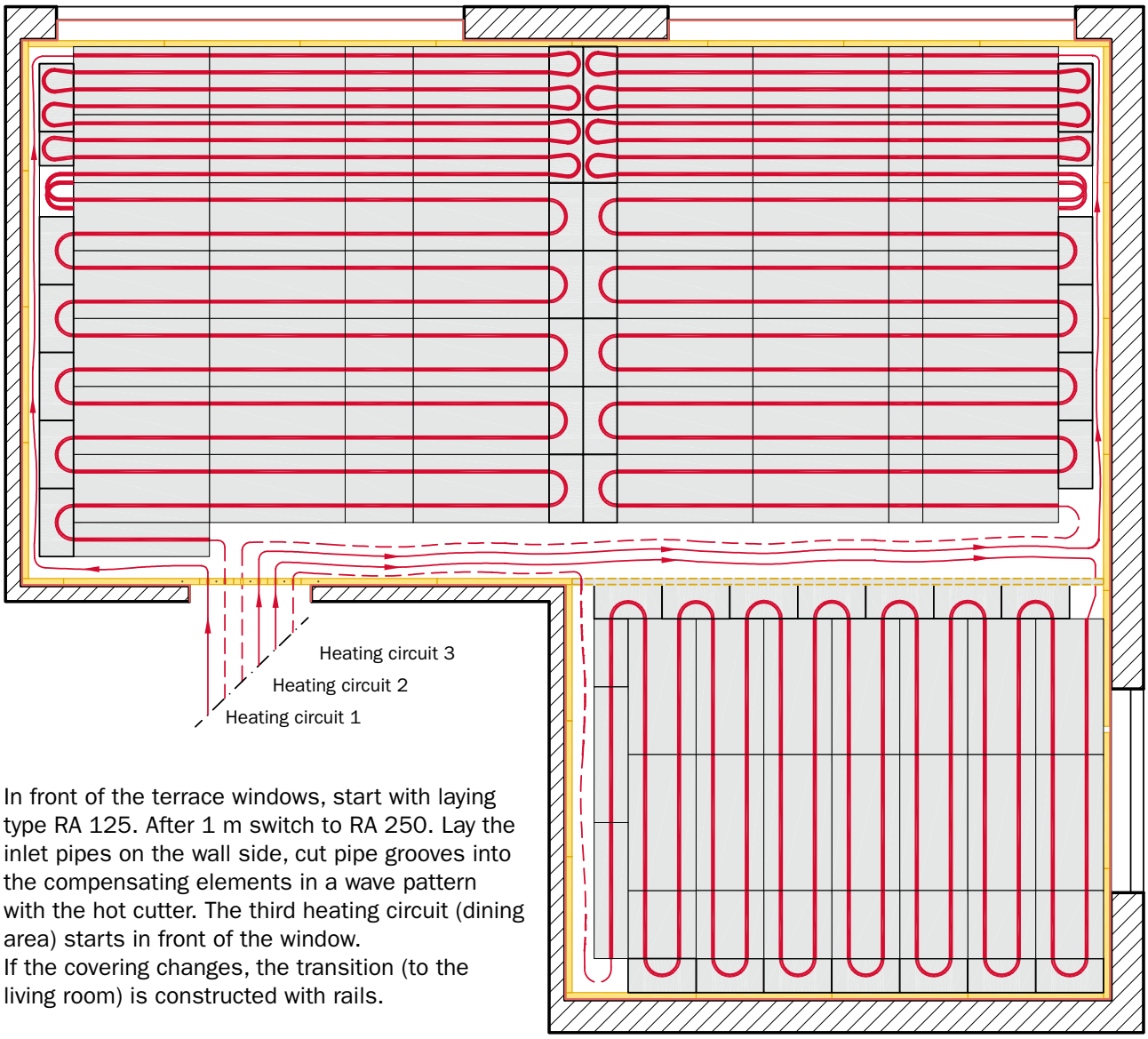


In front of the terrace window, start with laying type RA 125.
After 1 m switch to RA 250. Choose heating circuits of the same size.
Lay inlet pipes along the outer wall and cut missing pipe grooves into the compensating elements in a wave pattern with the hot cutter.

Legend

- Residence zone (RA = 250 mm)
- Edge zone (RA = 125 mm)
- Compensating element
- Head element with aluminium RA 250
- Head element with aluminium RA 125
- Transition element
- Edge board
- Door opening
- Edge insulation strip
- Flow
- Return

Living/dining room – 3 heating circuit – 44 m²

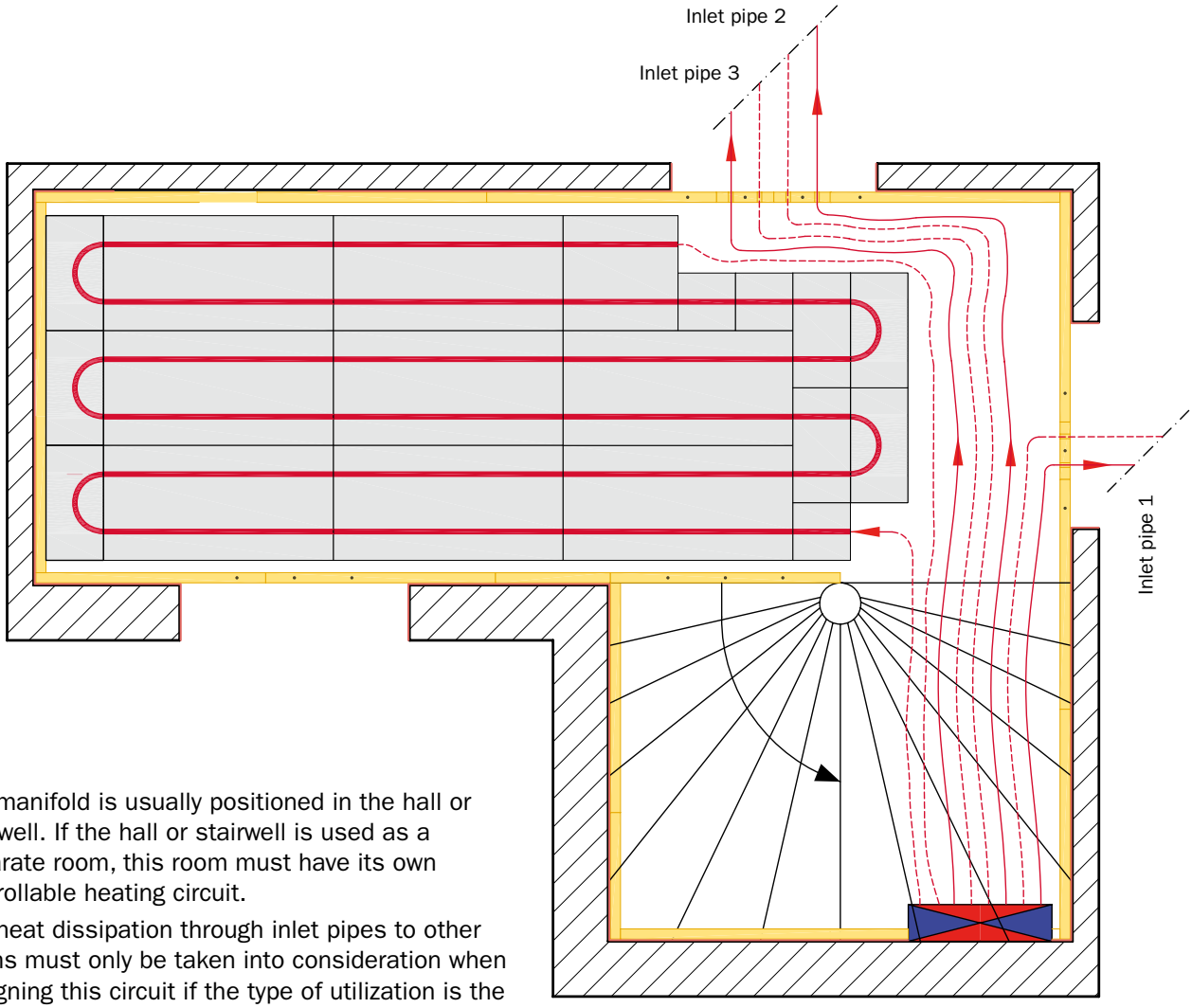


In front of the terrace windows, start with laying type RA 125. After 1 m switch to RA 250. Lay the inlet pipes on the wall side, cut pipe grooves into the compensating elements in a wave pattern with the hot cutter. The third heating circuit (dining area) starts in front of the window.
If the covering changes, the transition (to the living room) is constructed with rails.

Legend

- Residence zone (RA = 250 mm)
- Edge zone (RA = 125 mm)
- Compensating element
- Head element with aluminium RA 250
- Head element with aluminium RA 125
- Transition element
- Edge board
- Door opening
- Edge insulation strip
- Flow
- Return

Stairwell – inlet pipes



The manifold is usually positioned in the hall or stairwell. If the hall or stairwell is used as a separate room, this room must have its own controllable heating circuit.

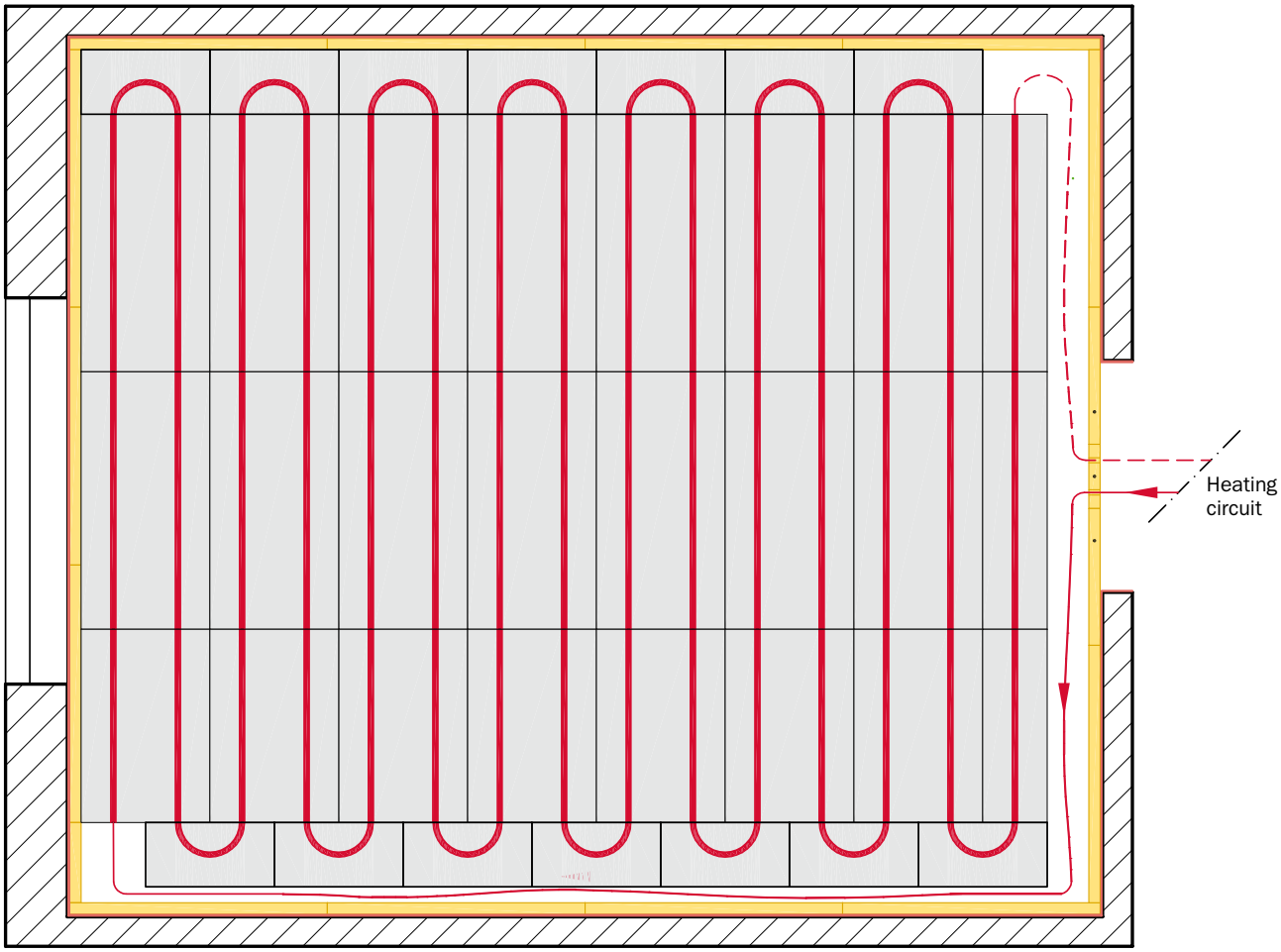
The heat dissipation through inlet pipes to other rooms must only be taken into consideration when designing this circuit if the type of utilization is the same.

Inlet pipes that run in freely cut-in pipe channels without a baffle plate dissipate far less heat than inlet pipes that are laid in system sheets with aluminium.

Legend

Residence zone (RA = 250 mm)	Edge board	Manifold
Head element with aluminium RA 250	Door opening	Flow
Compensating element	Edge insulation strip	Return

Bedroom – 1 heating circuit – 17 m²

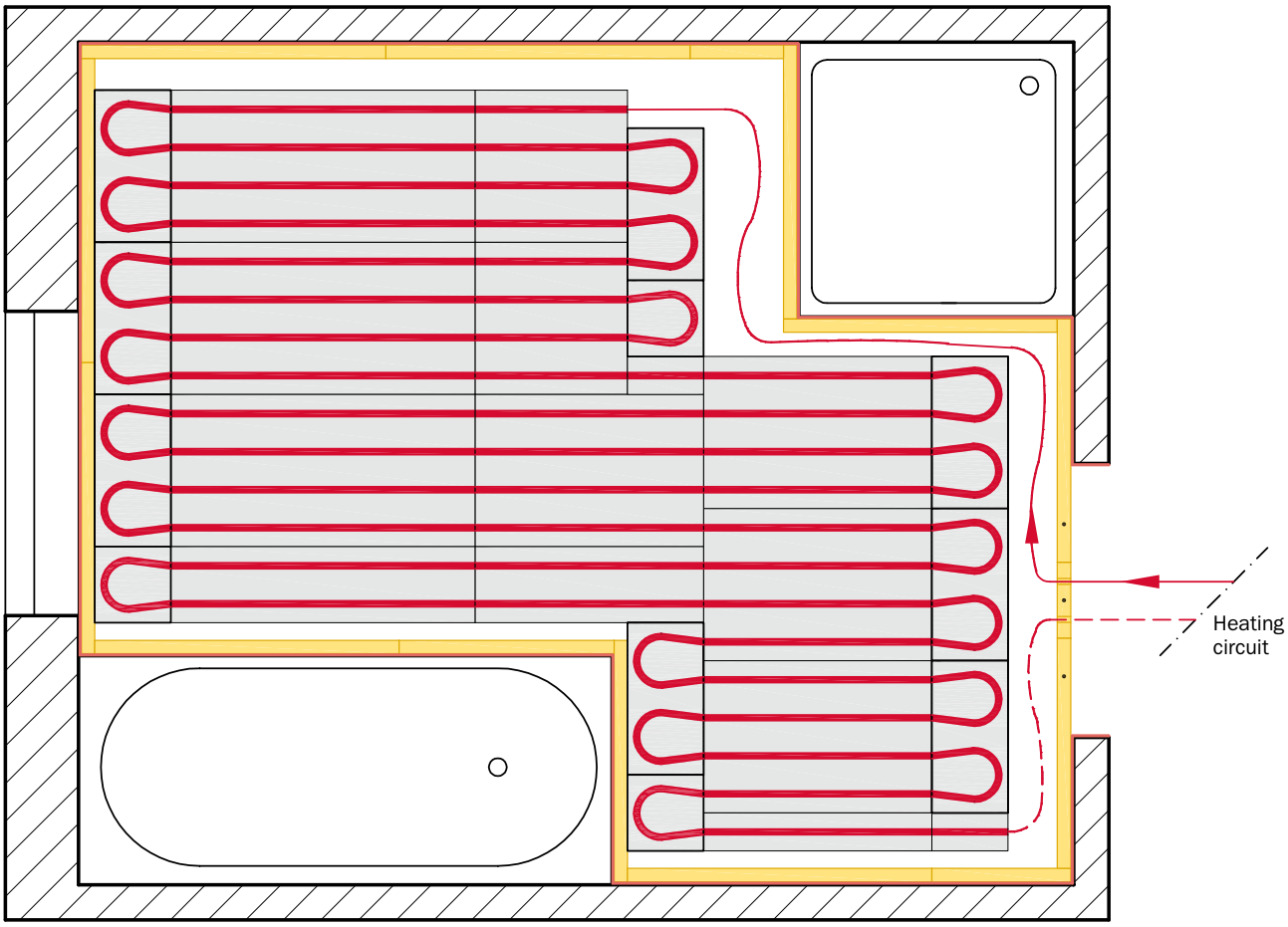


In rooms without floor-level windows, RA 250 can usually be used. The heating circuit starts in front of the window, the inlet pipe is guided along the outer wall, the pipe grooves are cut into the compensating elements in a wave pattern with the hot cutter.

Legend

Residence zone (RA = 250 mm)	Edge board	Flow
Head element with aluminium RA 250	Door opening	Return
Compensating element	Edge insulation strip	

Bathroom – 1 heating circuit – 9 m²



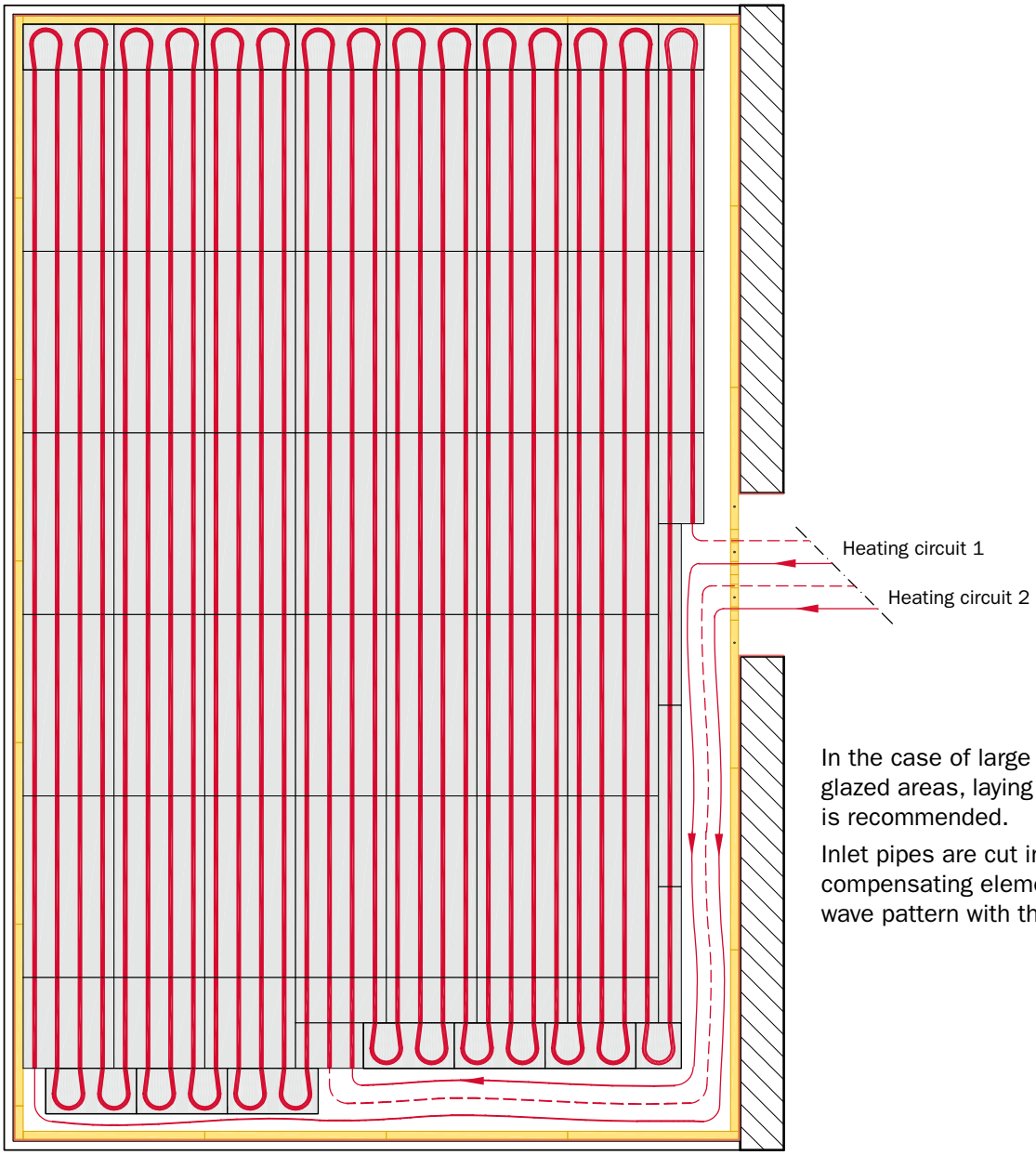
Unheated shower and bathtub areas are fitted with compensating elements and closed with a rail.
The heating area is constructed in RA 125.

Assembly tip: If there are frequent changes of direction/short pipe distances, fix the head elements with Ultrabond ECO FIX.

Legend

Edge zone (RA = 125 mm)	Edge board	Flow
Head element with aluminium RA 125	Door opening	Return
Compensating element	Edge insulation strip	

Conservatory – 2 heating circuits – 24 m²



In the case of large exterior glazed areas, laying type RA 125 is recommended.

Inlet pipes are cut into the compensating elements in a wave pattern with the hot cutter.

Legend

Edge zone (RA = 125 mm)	Edge board	Flow
Head element with aluminium RA 125	Door opening	Return
Compensating element	Edge insulation strip	

Detailed information

Additional insulation in dry-wall construction

≤ 1.0 kN*	≤ 2.0 kN/m²	Category		EN 1991		EN 1991/NA		SIA 261	
				–	–	✓ A2 A3	–	–	–

Load distribution layer	Separating board (tiles)	Separating board + laminate	Parquet	Floorboards on floor battens	Fermacell	Fermacell	Screed bricks
Thickness	5 mm	5 + 8 mm	15 mm	20-22 mm	20 mm	25 mm	20 mm
EPS DEO 200 kPa WLG 035	max. 20 mm	max. 20 mm	max. 20 mm	max. 40 mm	max. 70 mm	max. 90 mm	max. 130 mm
max. layers	1	1	1	1	2	2	2
XPS DEO 300 kPa WLG 035	max. 30 mm	max. 30 mm	max. 30 mm	max. 50 mm	max. 70 mm	max. 90 mm	max. 140 mm
max. layers	1	1	1	1	2	2	3
XPS DEO 500 kPa WLG 035	max. 60 mm	max. 60 mm	max. 60 mm	max. 80 mm	max. 100 mm	max. 120 mm	max. 190 mm
max. layers	1	1	1	2	2	2	3
Wood fibre insulation 150 kPa	max. 20 mm	max. 20 mm	max. 20 mm	max. 60 mm	max. 40 mm	max. 50 mm	max. 100 mm
max. layers	1	1	1	1	1	1	2
plus 12.5 mm load distribution sheet	required	required	required				
Levelling screed	not possible	Additional insulation/fill > 30 mm: Subtraction of fill thickness from max. insulation thickness					
plus 12.5 mm load distribution sheet	not possible	required → if no additional insulation is used					

≤ 2.0 kN*	≤ 2.0 kN/m²	Category		EN 1991		EN 1991/NA		SIA 261	
				✓ A	–	✓ A2 A3	✓ B1 D1	✓ A1	–

Load distribution layer	Separating board (tiles)	Separating board + laminate	Parquet	Floorboards on floor battens	Fermacell	Fermacell	Screed bricks
Thickness	5 mm	5 + 8 mm	15 mm	20-22 mm	20 mm	25 mm	20 mm
EPS DEO 200 kPa WLG 035	max. 20 mm	max. 20 mm	max. 20 mm	max. 40 mm	max. 50 mm	max. 70 mm	max. 130 mm
max. layers	1	1	1	1	1	2	2
XPS DEO 300 kPa WLG 035	max. 30 mm	max. 30 mm	max. 30 mm	max. 40 mm	max. 50 mm	max. 70 mm	max. 140 mm
max. layers	1	1	1	1	2	2	3
XPS DEO 500 kPa WLG 035	max. 60 mm	max. 60 mm	max. 60 mm	max. 60 mm	max. 70 mm	max. 90 mm	max. 190 mm
max. layers	1	1	1	2	1	2	3
Wood fibre insulation 150 kPa	–	max. 20 mm	max. 20 mm	max. 20 mm	–	max. 40 mm	max. 80 mm
max. layers		1	1	1		1	2
plus 12.5 mm load distribution sheet		required	required				
Levelling screed	not possible	Additional insulation/fill > 30 mm: Subtraction of fill thickness from max. insulation thickness					
plus 12.5 mm load distribution sheet	not possible	required → if no additional insulation is used					

*Individual load (Q_k): Supporting surface min. 20 cm², max. deformation < 3 mm; particularly heavy objects (aquariums, bathtubs) must be considered separately

Requirements for the load-bearing subsurface

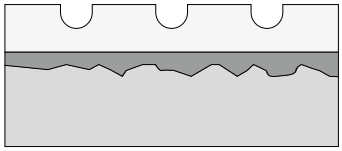
Flat, smooth and load-bearing subsurface required→ flatness tolerances in accordance with DIN 18202 tab. 3

		Inside micrometers as limit values in mm for measuring point intervals in m				
Line	Reference	0.1 m	1 m	4 m	10 m	15 m
4	Ready-to-cover floors with higher requirements, e.g. with self-levelling fillers	1 mm	3 mm	9 mm	12 mm	15 mm

Wooden joist ceilings must be torsionally rigid and free of deflection

Action recommendations dependent on height of unevennesses

A Unevennesses from 3 – 30 mm



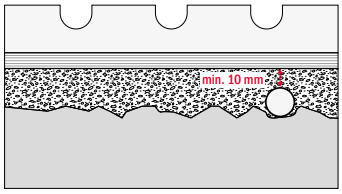
Universal panel UP

Levelling compound 3 – 30 mm

Raw floor

- Smooth with suitable filler or levelling compound.
- If necessary, pretreat floor in accordance with manufacturer instructions.

B Unevennesses from 10 – 50 mm or height adjustment



Universal panel UP

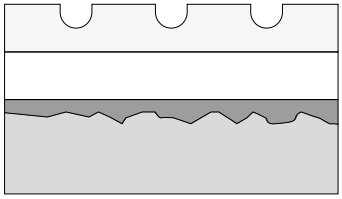
Plasterboards (min. 10 mm)

Fill

Raw floor

- Fill with cover made of 10 mm plasterboard.
- Caution: Not suitable for direct laying with separating board and tiles.

C Unevennesses as of 30 mm and height adjustment



Universal panel UP

XPS DEO board*

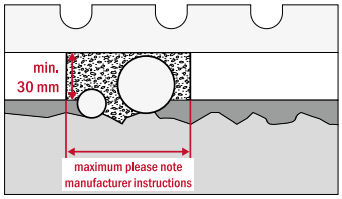
Levelling compound 3 – 30 mm

Raw floor

- Smooth out unevennesses filler or levelling compound.
- Height adjustment with XPS DEO boards.

*Caution: max. XPS construction heights see Additional insulation in dry-wall construction

D Unevennesses as of 30 mm and height adjustment



Universal panel UP

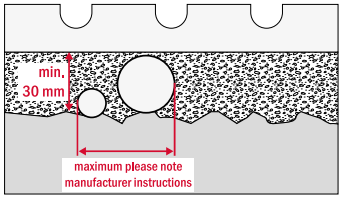
XPS DEO board* (see C) with Fermacell bound fill (min. 30 mm)

Levelling compound 3 – 30 mm

Raw floor

- Smooth out unevennesses filler or levelling compound.
- Height adjustment with XPS DEO boards.
- Level pipeways with bound fill.
- Please note manufacturer instructions

E Unevennesses as of 30 mm or height adjustment



Universal panel UP

Fermacell bound fill (min. 30 mm)

Raw floor

- Fermacell bound fill
- Please note manufacturer instructions

Material requirements

Quantities per m², excluding leftovers			RA 125	RA 250	Mix of 20% RA 125 80% RA 250
7715 16 30	TECEfloor ISO composite pipe 16 x 2, 300 m	[m/m²]	8.00	4.00	5.00
7752 00 10	TECEfloor universal panel UP 125	[pc./m²]	1.46		0.30
7752 00 11	TECEfloor universal panel UP 250	[pc./m²]		1.46	1.26
7752 00 12	TECEfloor head element UP 125	[pc./m²]	0.24		0.05
7752 00 13	TECEfloor head element UP 250	[pc./m²]		0.24	0.19
7752 00 22	TECEfloor head element or aluminium UP 125 alternative to 77 52 00 12	[pc./m²]	0.24		0.05
7752 00 23	TECEfloor head element or aluminium UP 250 alternative to 77 52 00 11	[pc./m²]		0.24	0.19
7752 00 15	TECEfloor compensating element UP	[pc./m²]	0.25	0.25	0.15
7752 00 16	TECEfloor edge board UP	[pc./m²]	1.20	1.20	1.20
7762 00 10	TECEfloor edge insulation strip 10/160	[m/m²]	1.00	1.00	1.00
7752 00 14	TECEfloor transition element UP		**Number of combined heating circuits RA 125/250**		
7752 00 17	TECEfloor edge board door opening UP		2 pc/door and heating circuit		
7752 00 24	TECEfloor load distribution sheet UP, 800 x 200 mm		0.5 pc/heating circuit on manifold		
7752 00 18	TECEfloor separating board UP see constr. type "DA"		1.45 pc/m²		
7752 00 19	TECEfloor joint adhesive strip UP 120 m see constr. "DA 01" and "DA 02"		2.5 m/m²		
7752 00 20	TECEfloor Ultrabond ECO FIX UP 10 kg see constr. type "DA" and "DP"		approx. 0.125 kg/m² per adhesive layer		
7752 00 21	TECEfloor hot cutter UP				
7731 00 02...12	TECEfloor stainless steel manifold HKV 12 with flow rate display				
7721 16 01	TECEfloor Eurocone clamping ring connection AL/PE-RT 16 x 2		2 pc/m²		
7749 00 10	TECEfloor SLQ servomotor 230 V		1 pc/m²		
7741 00 12	TECEfloor room thermostat RT 230 V		1 pc/room		
7743 00 10	TECEfloor terminal strip LK6 standard 230 V		per manifold and max. 6 rooms		

Installation times

Practical empirical values for installation times (no guarantee can be given for these times).	1 person
Laying type "RA 125" (edge insulation strip, system elements, pipe)	12 min/m²
Laying type "RA 250" (edge insulation strip, system elements, pipe)	8 min/m²
Laying type "Mix" 20 % RA 125/80 % RA 250 (edge insulation strip, system elements, pipe)	10 min/m²
Laying of separating board	8 min/m²
Application of adhesive per layer	0.5 min/m²
Application of joint adhesive strip	0.5 min/m²

Installation steps

1) Level unevennesses (see p. 19 Detailed information), apply seal if necessary
2) Calculate room geometry and possible pipe guide, if necessary lay a few head pieces and boards as a test
3) Apply adhesive if necessary (see Constructions)
4) Lay additional insulation if necessary (see Constructions)
5) Position edge insulation strip
6) Lay edge boards
7) Apply adhesive if necessary (see Constructions)
8) Lay head pieces and system elements
9) Lay compensating elements
10) Cut in pipe guides with hot cutter
11) Lay pipe
12) Lay load distribution sheets and glue if necessary
13) Apply adhesive if necessary (see Constructions)
14) Lay separating board if necessary (see Constructions)
15) Apply joint adhesive strip if necessary (see Constructions)
16) Lay surface or dry screed (see Constructions)

Constructions

TECEfloor universal panel UP

Application overview

Page	Type	Floor covering	Installation height without floor covering (mm)	Min. thermal resistance (m²K/W)	Impact sound insulation calculated value (dB)or test value
31	DP 03	Solid floorboards to 22 mm	30	≥ 0.82	No information
29	DP 01	Parquet as of 15 mm	32	≥ 0.82	14
25	DA 01	Tiles as of 8 mm + 4 mm adhesive	35	≥ 0.82	14
27	DA 04	Laminate as of 8 mm	35	≥ 0.82	19
35	TE 20 03	all*	48	≥ 0.82	18
33	TE 20 01	all*	50	≥ 0.82	18
42	TE 25 06	all*	52	≥ 0.82	18
40	TE 25 04	all*	53	≥ 0.82	18
37	TE 25 01	all*	55	≥ 0.82	18
47	CAF 03	all*	61	≥ 0.93	24
32	DP 04	Solid floorboards to 22 mm	70	2.00	No information
30	DP 02	Parquet as of 15 mm	72	2.00	No information
26	DA 02	Tiles as of 8 mm + 4 mm adhesive	75	2.00	No information
28	DA 05	Laminate as of 8 mm	75	2.00	No information
39	TE 25 03	all*	85	1.44	28
36	TE 20 04	all*	88	2.00	18
34	TE 20 02	all*	90	2.00	18
45	CAF 01	all*	90	1.32	26
41	TE 25 05	all*	93	2.00	18
38	TE 25 02	all*	95	2.00	18
43	CT 01	all*	105	1.32	26
46	CAF 02	all*	120	2.07	No information
44	CT 02	all*	135	2.07	No information

* All types of carpet, tiles, parquet, laminate and plastic suitable for floor heating

DA 01

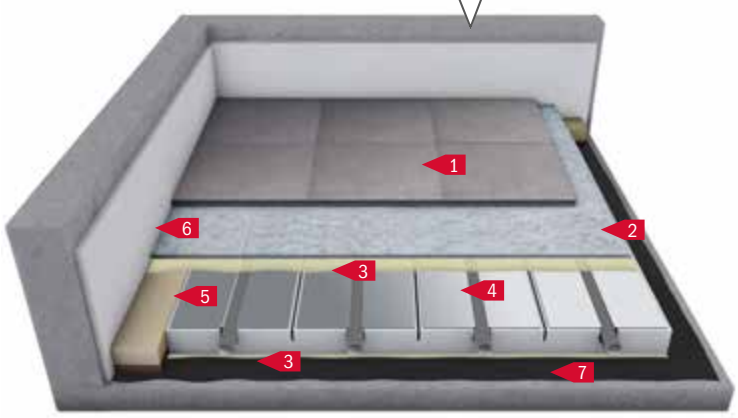
Separating board UP | Tiles

TECEfloor universal panel UP

Tile thickness as of 8 mm
Format ≥ 10 x 10 cm → ≤ 40 x 60 cm

Natural stone thickness ≥ 10 mm
joint width ≥ 3 mm

1	Tiles/natural stone including adhesive (see below)	≥ 12 mm
2	Separating board UP + joint adhesive strip	5 mm
3	Adhesive (MAPEI ECO FIX)	
4	Heating element EPS + system pipe	30 mm
5	Edge board (30 mm), mandatory	
6	Edge insulation strip	
7	Moisture barrier if applicable (connection to subsurface)	
		≥ 47 mm



Ceilings between rooms of the same temperature

R > 0.82 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
U < 1.22 W/m²K	
14 dB	Test value in accordance with DIN ISO 140-8; applies for concrete ceilings > 12 cm (DIN4109:m' > 276 kg/m²)

~ 37 kg/m²	
q_k ≤ 2.0 kN/m²	
Q_k* ≤ 2.0 kN	*≥ 20 cm²

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	-
	-	-	-

1m max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	Wooden joist ceilings must be torsionally rigid and free of deflection
	Filling for compensation not permitted (exception: "Fermacell bound fill")
	Glue system elements to each other and the subsurface over the complete surface, use in total MAPEI ECO FIX ca. 250 gr/m²
MAPEI Elastorapid	Lay tiles in combined process with MAPEI adhesive Elastorapid and joint mortar Ultracolor Plus
	This construction applies for apartment ceilings with rooms of the same temperature, additional thermal insulation is not required
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm)

Thermal output: DA
See product data sheets and detailed information

DA 02

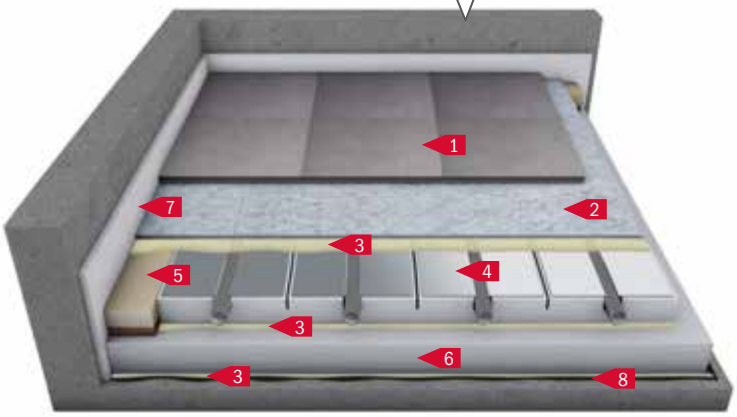
Separating board UP | Tiles with additional insulation

TECEfloor universal panel UP

Tile thickness as of 8 mm
Format ≥ 10 x 10 cm → ≤ 40 x 60 cm

Natural stone thickness ≥ 10 mm
joint width ≥ 3 mm

1	Tiles/natural stone including adhesive (see below)	≥ 12 mm
2	Separating board UP + joint adhesive strip	5 mm
3	Adhesive (MAPEI ECO FIX)	
4	Heating element EPS + system pipe	30 mm
5	Edge board (30 mm), mandatory	
6	Additional insulation XPS 035 DEO, 500 kPa	40 mm
7	Edge insulation strip	
8	Moisture barrier if applicable (connection to subsurface)	
		≥ 87 mm



Ceilings against unheated rooms/ground

R	2.0 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met (as of 20 mm additional insulation)
U	0.5 W/m²K	EnEV 2009: Umax Old building 0.5 W/m²K (→ 40 mm XPS 035) Ureference New building 0.35 W/m²K (→ 60 mm XPS 035)
	The universal panel UP (EPS DEO) is thermal insulation without defined impact sound insulation	

	~ 38 kg/m²
q_k	≤ 2.0 kN/m²
Q_k *	≤ 2.0 kN *≥ 20 cm²

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	-
	-	-	-

1m max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	Wooden joist ceilings must be torsionally rigid and free of deflection
	Building waterproofing in accordance with DIN 18195 exists under the concrete slab in structures against the ground, otherwise must be applied on the raw floor
	Filling for compensation not permitted (exception: "Fermacell bound fill")
	Glue the material layers to each other over the complete area (create a bond), use in total MAPEI ECO FIX ca. 375 gr/m²
MAPEI Elastorapid	Lay tiles in combined process with MAPEI adhesive Elastorapid and joint mortar Ultracolor Plus
	New building: DIN EN 1264 → min. 20 mm EPS 035 DEO, 200 kPa; EnEV 2009 → reference: 60 mm XPS 500 kPa Old building: EnEV 2009 → min. 40 mm XPS 035 DEO, 500 kPa (exception: EnEV 2009 Appendix 3 No. 5e) As concrete bases are usually insulated, additional thermal insulation can be omitted or reduced
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm)

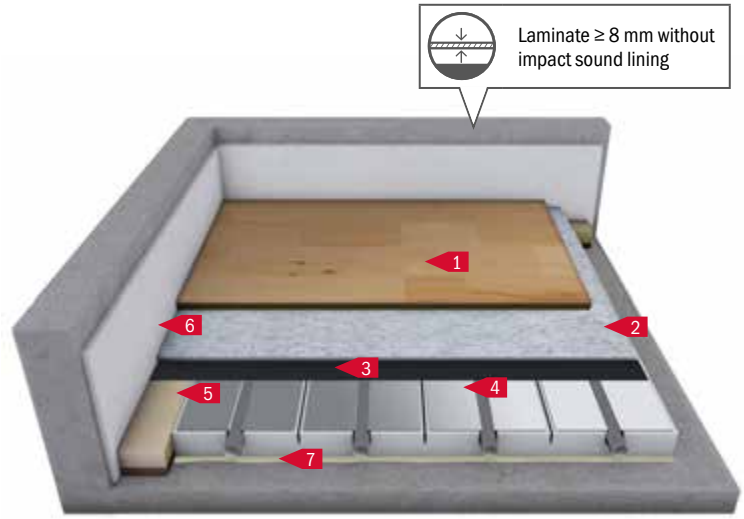
Thermal output: DA
See product data sheets and detailed information

DA 04

Separating board UP | Laminate

TECEfloor universal panel UP

1	Laminate/ready-to-lay parquet	≥ 8 mm
2	Separating board UP	5 mm
3	Moisture barrier if applicable	
4	Heating element EPS + system pipe	30 mm
5	Edge board (30 mm), use recommended	
6	Edge insulation strip	
7	Adhesive, MAPEI ECO FIX	
		≥ 43 mm



Ceilings between rooms of the same temperature

R > 0.82 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
U < 1.22 W/m²K	
19 dB	Test value in accordance with DIN ISO 140-8; applies for concrete ceilings > 12 cm (DIN4109:m' > 276 kg/m²)

~ 15 kg/m²	
q_k ≤ 2.0 kN/m²	
Q_k* ≤ 2.0 kN	*≥ 20 cm²

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	–	✓ B1 D1	–
	–	–	–

1m max. 3 mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	Wooden joist ceilings must be torsionally rigid and free of deflection
	Glue system elements to the subsurface over the complete surface, use in particular MAPEI ECO FIX ca. 125 gr/m²
	This construction applies for apartment ceilings with rooms of the same temperature, additional thermal insulation is not required
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm) If necessary, protect surface against moisture from below in accordance with manufacturer instructions (vapour barrier) Use of separating board UP as load distribution and impact sound insulation sheet

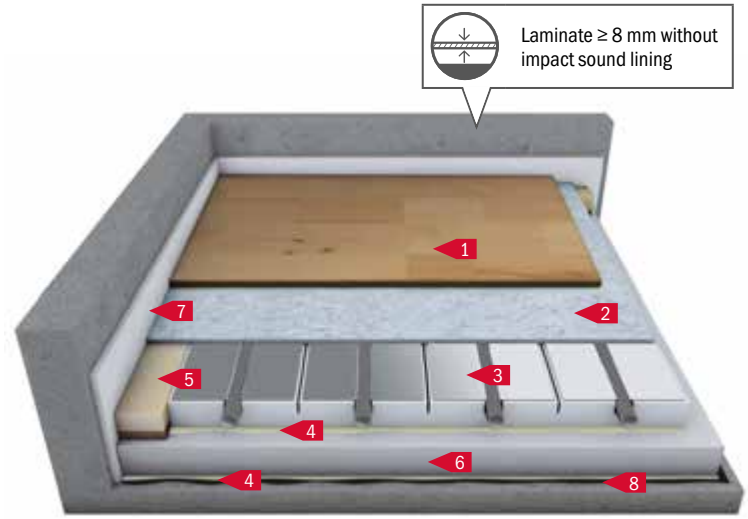
Thermal output: DA
See product data sheets and detailed information

DA 05

Separating board UP | Laminate with additional insulation

TECEfloor universal panel UP

1	Laminate/ready-to-lay parquet	≥ 8 mm
2	Separating board UP	5 mm
3	Heating element EPS + system pipe	30 mm
4	Adhesive	
5	Edge board (30 mm), use recommended	
6	Additional insulation XPS 035 DEO, 500 kPa	40 mm
7	Edge insulation strip	
8	Moisture barrier if applicable (connection to subsurface)	
		≥ 83 mm



Ceilings against unheated rooms/ground

R	2.00 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met (as of 20 mm additional insulation)	~ 16 kg/m²
U	0.50 W/m²K	EnEV 2009: U_{max} Old building 0.5 W/m²K (→ 40 mm XPS 035) $U_{reference}$ New building 0.35 W/m²K (→ 60 mm XPS 035)	≤ 2.0 kN/m²
	The universal panel UP (EPS DEO) is thermal insulation without defined impact sound insulation		≤ 2.0 kN *≥ 20 cm²

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	-
	-	-	-

1m max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	Wooden joist ceilings must be torsionally rigid and free of deflection
	Building waterproofing in accordance with DIN 18195 exists under the concrete slab in structures against the ground, otherwise must be applied on the raw floor
	Glue the material layers to each other over the complete area (create a bond), use in total MAPEI ECO FIX ca. 250 gr/m²
	New building: DIN EN 1264 → min. 20 mm EPS 035 DEO, 200 kPa; EnEV 2009 → reference: 60 mm XPS 500 kPa Old building: EnEV 2009 → min. 40 mm XPS 035 DEO, 500 kPa (exception: EnEV 2009 Appendix 3 No. 5e) As concrete bases are usually insulated, additional thermal insulation can be omitted or reduced
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm) If necessary, protect surface against moisture from below in accordance with manufacturer instructions (vapour barrier)

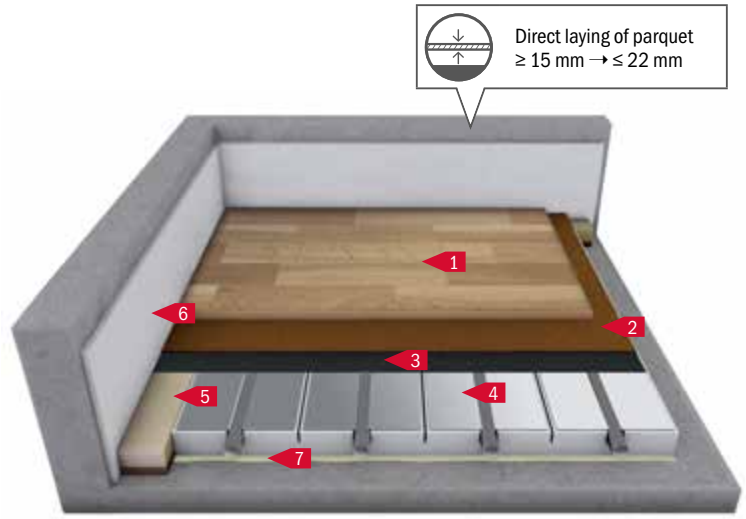
Thermal output: DA
See product data sheets and detailed information

DP 01

Direct laying of parquet

TECEfloor universal panel UP

1	Parquet	≥ 15 mm
2	Impact sound insulation	2 mm
3	Moisture barrier if applicable	
4	Heating element EPS + system pipe	30 mm
5	Edge board (30 mm), use recommended	
6	Edge insulation strip	
7	Adhesive	
		≥ 47 mm



Ceilings between rooms of the same temperature

> 0.82 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
< 1.22 W/m²K	
14 dB	Test value in accordance with DIN ISO 140-8; applies for concrete ceilings > 12 cm (DIN4109:m' > 276 kg/m²)

~ 13 kg/m²	
≤ 2.0 kN/m²	
≤ 2.0 kN	*≥ 20 cm²

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	-
	-	-	-

1m, max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	Glue system elements to the subsurface over the complete surface, use in total MAPEI ECO FIX ca. 125 gr/m²
	This construction applies for apartment ceilings with rooms of the same temperature, additional thermal insulation is not required
	The details for the permitted individual load (Qk) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm) If necessary, protect surface against moisture from below in accordance with manufacturer instructions (vapour barrier)

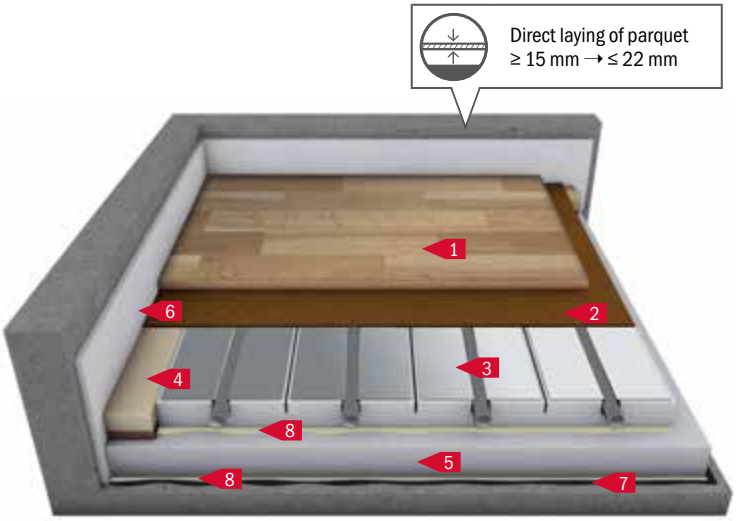
Thermal output: DP
See product data sheets and detailed information

DP 02

Direct laying of parquet with additional insulation

TECEfloor universal panel UP

1	Parquet	≥ 15 mm
2	Impact sound insulation	2 mm
3	Heating element EPS + system pipe	30 mm
4	Edge board (30 mm), use recommended	
5	Additional insulation XPS 035 DEO, 500 kPa	40 mm
6	Edge insulation strip	
7	Moisture barrier if applicable (connection to subsurface)	
8	Adhesive	
		≥ 87 mm



Ceilings against unheated rooms/ground

R	2.00 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met (as of 20 mm additional insulation)
U	0.50 W/m²K	EnEV 2009: U_{max} Old building 0.5 W/m²K (→ 40 mm XPS 035) $U_{reference}$ New building 0.35 W/m²K (→ 60 mm XPS 035)
	The universal panel UP (EPS DEO) is thermal insulation without defined impact sound insulation	

	~ 14 kg/m²
q_k	≤ 2.0 kN/m²
Q_k *	≤ 2.0 kN *≥ 20 cm²

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	-
	-	-	-

1m max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	Building waterproofing in accordance with DIN 18195 exists under the concrete slab in structures against the ground, otherwise must be applied on the raw floor
	Glue the material layers to each other over the complete area (create a bond), use in particular MAPEI ECO FIX ca. 250 gr/m²
	New building: DIN EN 1264 → min. 20 mm EPS 035 DEO, 200 kPa; EnEV 2009 → reference: 60 mm XPS 500 kPa Old building: EnEV 2009 → min. 40 mm XPS 035 DEO, 500 kPa (exception: EnEV 2009 Appendix 3 No. 5e) As concrete bases are usually insulated, additional thermal insulation can be omitted or reduced
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm) If necessary, protect surface against moisture from below in accordance with manufacturer instructions (vapour barrier)

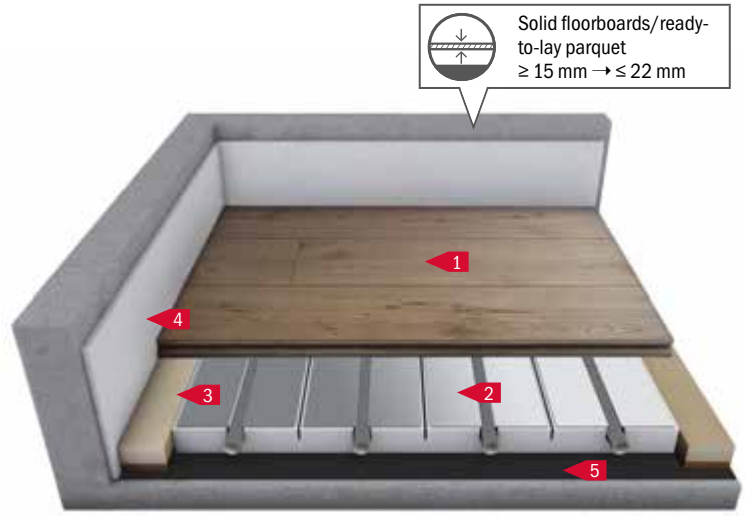
Thermal output: DP
See product data sheets and detailed information

DP 03

Direct laying of solid floorboards on floor battens with additional insulation

TECEfloor universal panel UP

1	Floorboards	≤ 22 mm
2	Heating element EPS + system pipe	30 mm
3	Edge boards or planed squared timbers (30 mm)	
4	Edge insulation strip	
5	Moisture barrier if applicable	
		≤ 52 mm



Ceilings between rooms of the same temperature

R > 0.82 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
U < 1.22 W/m²K	
The universal panel UP (EPS DEO) is thermal insulation without defined impact sound insulation	

~ 18 kg/m²	
q_k ≤ 2.0 kN/m²	
Q_k* ≤ 2.0 kN	*≥ 20 cm²

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	-
	-	-	-

1m, max. 3 mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	This construction applies for apartment ceilings with rooms of the same temperature, additional thermal insulation is not required
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm) If necessary, protect surface against moisture from below in accordance with manufacturer instructions (vapour barrier) Screw edge board onto subsurface, planed squared timbers (l > 3 m) can be laid floating

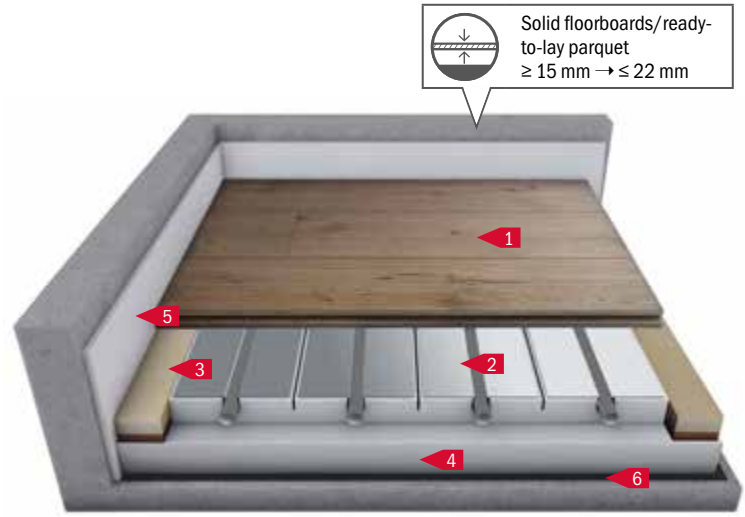
Thermal output: DP
See product data sheets and detailed information

DP 04

Direct laying of timber floorboards on floor battens with additional insulation

TECEfloor universal panel UP

1	Timber Floorboards	≤ 22 mm
2	Heating element EPS + system pipe	30 mm
3	Planed squared timbers (30 mm)	
4	Additional insulation EPS 035 DEO, 200 kPa	40 mm
5	Edge insulation strip	
6	Moisture barrier if applicable	
		≤ 92 mm



Ceilings against unheated rooms/ground

2.00 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met (as of 20 mm additional insulation)
0.50 W/m²K	EnEV 2009: U_{max} Old building 0.5 W/m²K (→ 40 mm XPS 035) $U_{reference}$ New building 0.35 W/m²K (→ 60 mm XPS 035)
The universal panel UP (EPS DEO) is thermal insulation without defined impact sound insulation	

~ 20 kg/m²	
≤ 2.0 kN/m²	
≤ 2.0 kN	*≥ 20 cm²

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	-
	-	-	-

	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	Building waterproofing in accordance with DIN 18195 exists under the concrete slab in structures against the ground, otherwise must be applied on the raw floor
	New building: DIN EN 1264 → min. 20 mm EPS 035 DEO, 200 kPa; EnEV 2009 → reference: 60 mm EPS 035 DEO > 200 kPa Old building: EnEV 2009 → min. 40 mm EPS 035 DEO > 200 kPa (exception: EnEV 2009 Appendix 3 No. 5e) As concrete bases are usually insulated, additional thermal insulation can be omitted or reduced
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm) If necessary, protect surface against moisture from below in accordance with manufacturer instructions (vapour barrier) Planed squared timbers (l > 3 m) can be laid floating

Thermal output: DP
See product data sheets and detailed information

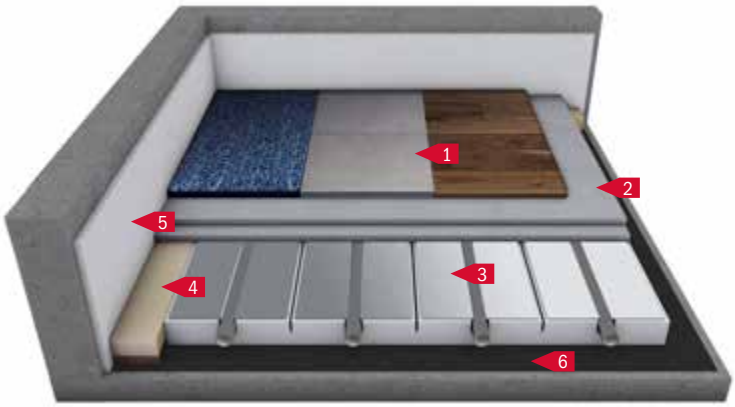
TE20 01

Dry screed element (Fermacell 20 mm)

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Dry screed element (Fermacell)	20 mm
3	Heating element EPS + system pipe	30 mm
4	Edge board (30 mm), use recommended	
5	Edge insulation strip	
6	Moisture barrier if applicable	

50 mm



Ceilings between rooms of the same temperature

R > 0.82 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
U < 1.22 W/m²K	
18 dB	Calculated value in accordance with DIN 4109 on solid ceilings

33–53 kg/m²	
q_k ≤ 2.0 kN/m²	
Q_k* ≤ 2.0 kN	*≥ 20 cm²

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	-
	-	-	-

1m, max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	This construction applies for apartment ceilings with rooms of the same temperature, additional thermal insulation is not required
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm) In the case of higher imposed or individual loads, the screed thickness can be adjusted (→ TE25)

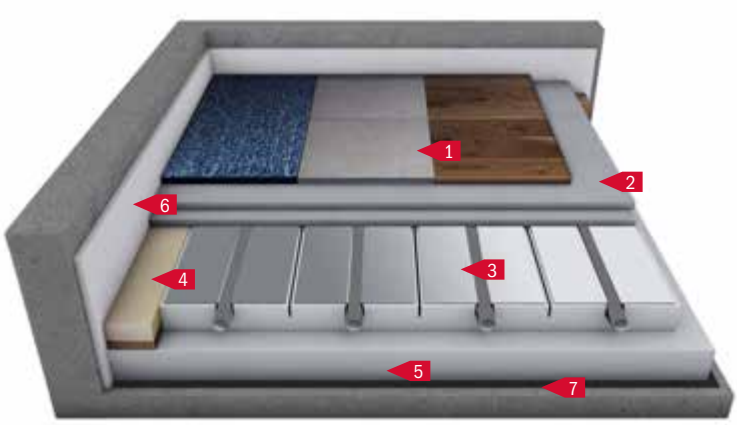
Thermal output: TE20
See product data sheets and detailed information

TE20 02

Dry screed element (Fermacell 20 mm) with additional insulation

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Dry screed element (Fermacell)	20 mm
3	Heating element EPS + system pipe	30 mm
4	Edge board (30 mm), use recommended	
5	Additional insulation EPS 035 DEO, 200 kPa	40 mm
6	Edge insulation strip	
7	Moisture barrier if applicable	
		90 mm



Ceilings against unheated rooms/ground

2.00 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met (as of 20 mm additional insulation)
0.50 W/m²K	EnEV 2009: U_{max} Old building 0.5 W/m²K (→ 40 mm EPS 035) $U_{reference}$ New building 0.35 W/m²K (→ 60 mm EPS 035)
18 dB	Calculated value in accordance with DIN 4109 on solid ceilings

35–55 kg/m²	
≤ 2.0 kN/m²	
≤ 1.5 kN	*≥ 20 cm²

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	–	✓ B1 D1	–
	–	–	–

1m, max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	Building waterproofing in accordance with DIN 18195 exists under the concrete slab in structures against the ground, otherwise must be applied on the raw floor
	New building: DIN EN 1264 → min. 20 mm EPS 035 DEO, 200 kPa; EnEV 2009 → reference: 60 mm XPS 500 kPa Old building: EnEV 2009 → min. 40 mm XPS 035 DEO, 500 kPa (exception: EnEV 2009 Appendix 3 No. 5e) As concrete bases are usually insulated, additional thermal insulation can be omitted or reduced
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm) In the case of higher imposed or individual loads, the screed thickness can be adjusted (→ TE25)

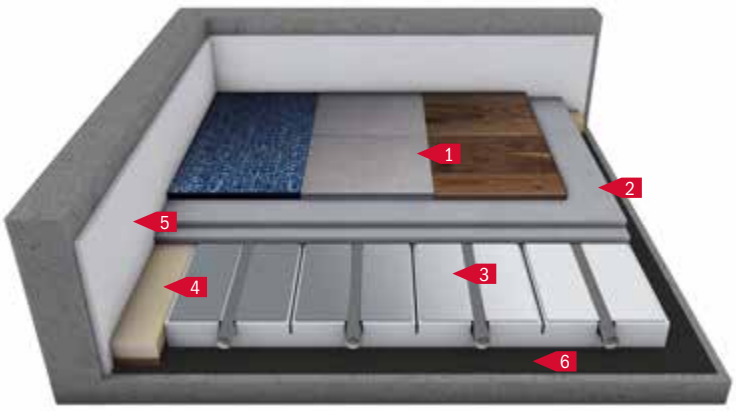
Thermal output: TE20
See product data sheets and detailed information

TE20 03

Dry screed element (Knauf Brio 18 mm)

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Dry screed element (Knauf Brio)	18 mm
3	Heating element EPS + system pipe	30 mm
4	Edge board (30 mm), use recommended	
5	Edge insulation strip	
6	Moisture barrier if applicable	
		48 mm



Ceilings between rooms of the same temperature

> 0.82 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
< 1.22 W/m²K	
18 dB	Calculated value in accordance with DIN 4109 on solid ceilings

33–53 kg/m²	
≤ 2.0 kN/m²	
≤ 1.0 kN *≥ 20 cm²	

Category	EN 1991	EN 1991/NA	SIA 261
	-	✓ A2 A3	-
	-	-	-
	-	-	-

1m, max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	This construction applies for apartment ceilings with rooms of the same temperature, additional thermal insulation is not required
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm) In the case of higher imposed or individual loads, the screed thickness can be adjusted (→ TE25)

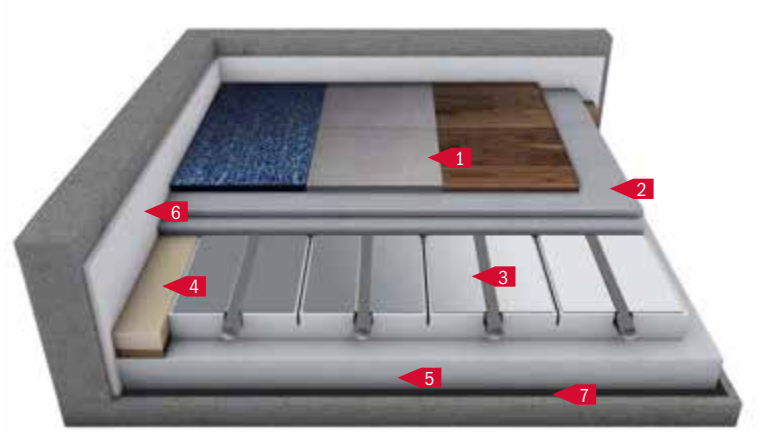
Thermal output: TE20
See product data sheets and detailed information

TE20 04

Dry screed element (Knauf Brio 18 mm) with additional insulation

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Dry screed element (Knauf Brio)	18 mm
3	Heating element EPS + system pipe	30 mm
4	Edge board (30 mm), use recommended	
5	Additional insulation EPS 035 DEO, 200 kPa	40 mm
6	Edge insulation strip	
7	Moisture barrier if applicable	
		88 mm



Ceilings against unheated rooms/ground

R	2.00 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met (as of 20 mm additional insulation)
U	0.50 W/m²K	EnEV 2009: U_{max} Old building 0.5 W/m²K (→ 40 mm EPS 035) $U_{reference}$ New building 0.35 W/m²K (→ 60 mm EPS 035)
	18 dB	Calculated value in accordance with DIN 4109 on solid ceilings

	35–55 kg/m²
q_k	≤ 2.0 kN/m²
Q_k *	≤ 1.0 kN *≥ 20 cm²

Category	EN 1991	EN 1991/NA	SIA 261
	–	✓ A2 A3	–
	–	–	–
	–	–	–

1m / max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	Building waterproofing in accordance with DIN 18195 exists under the concrete slab in structures against the ground, otherwise must be applied on the raw floor
	New building: DIN EN 1264 → min. 20 mm EPS 035 DEO, 200 kPa; EnEV 2009 → reference: 60 mm XPS 500 kPa Old building: EnEV 2009 → min. 40 mm XPS 035 DEO, 500 kPa (exception: EnEV 2009 Appendix 3 No. 5e) As concrete bases are usually insulated, additional thermal insulation can be omitted or reduced
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm) In the case of higher imposed or individual loads, the screed thickness can be adjusted (→ TE25)

Thermal output: TE20
See product data sheets and detailed information

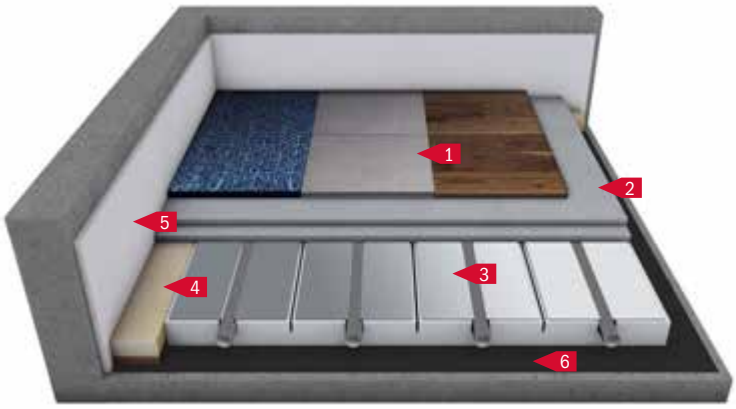
TE25 01

Dry screed element (Fermacell 25 mm)

TECEfloor universal panel UP

1. Carpet/tiles/parquet/laminate/plastic
2. Dry screed element (Fermacell) — 25 mm
3. Heating element EPS + system pipe — 30 mm
4. Edge board (30 mm), use recommended
5. Edge insulation strip
6. Moisture barrier if applicable

55 mm



Ceilings between rooms of the same temperature

R	> 0.82 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met	38–58 kg/m²
U	< 1.22 W/m²K		q_k ≤ 4.0 kN/m²
	18 dB	Calculated value in accordance with DIN 4109 on solid ceilings	Q_k ≤ 3.0 kN

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1 A2
	-	✓ B1 D1	✓ B
	-	✓ C1*	-

1m, max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	This construction applies for apartment ceilings with rooms of the same temperature, additional thermal insulation is not required
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm) * C1 : Structure with 25 mm Fermacell dry screed element 2E22 for application area C1 → areas with chairs, e.g. classrooms, restaurants, cafés, nursery schools with a permitted individual load of 3.0 KN and a permitted imposed load of 4.0 KN/m² (deviating from EN 1991/NA)

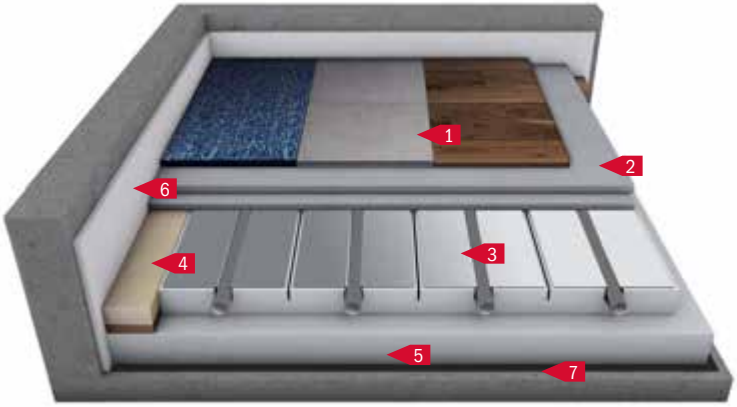
Thermal output: TE25
See product data sheets and detailed information

TE25 02

Dry screed element (Fermacell 25 mm) with additional insulation

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Dry screed element (Fermacell)	25 mm
3	Heating element EPS + system pipe	30 mm
4	Edge board (30 mm), use recommended	
5	Additional insulation EPS 035 DEO, 200 kPa	40 mm
6	Edge insulation strip	
7	Moisture barrier if applicable	
		95 mm



Ceilings against unheated rooms/ground

R	2.00 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met (as of 20 mm additional insulation)
U	0.50 W/m²K	EnEV 2009: U_{max} Old building 0.5 W/m²K (→ 40 mm EPS 035) $U_{reference}$ New building 0.35 W/m²K (→ 60 mm EPS 035)
	18 dB	Calculated value in accordance with DIN 4109 on solid ceilings

	39–59 kg/m²
q_k	≤ 4.0 kN/m²
Q_k	≤ 3.0 kN

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1 A2
	-	✓ B1 D1	✓ B
	-	✓ C1*	-

1m, max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	Building waterproofing in accordance with DIN 18195 exists under the concrete slab in structures against the ground, otherwise must be applied on the raw floor
	New building: DIN EN 1264 → min. 20 mm EPS 035 DEO, 200 kPa; EnEV 2009 → reference: 60 mm XPS 500 kPa Old building: EnEV 2009 → min. 40 mm XPS 035 DEO, 500 kPa (exception: EnEV 2009 Appendix 3 No. 5e) As concrete bases are usually insulated, additional thermal insulation can be omitted or reduced
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm) * C1 : Structure with 25 mm Fermacell dry screed element 2E22 for application area C1 → areas with chairs, e.g. classrooms, restaurants, cafés, nursery schools with a permitted individual load of 3.0 KN and a permitted imposed load of 4.0 KN/m² (deviating from EN 1991/NA)

Thermal output: TE25
See product data sheets and detailed information

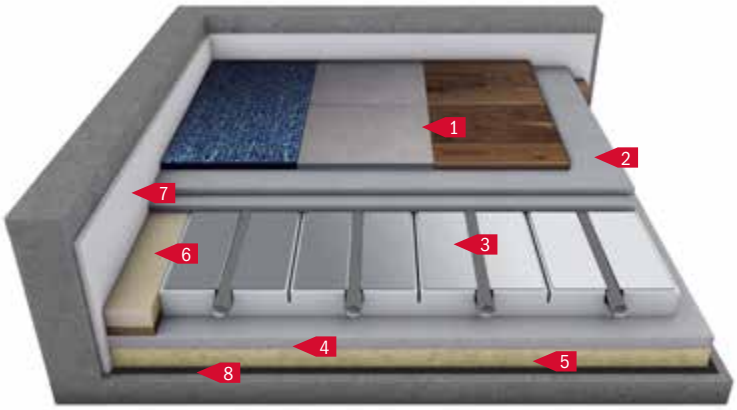
TE25 03

Dry screed element (Fermacell 25 mm)

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Dry screed element (Fermacell)	25 mm
3	Heating element EPS + system pipe	30 mm
4	Plasterboard	10 mm
5	Mineral wool	20 mm
6	Edge board (30 mm), use recommended	
7	Edge insulation strip	
8	Moisture barrier if applicable	

85 mm



Ceilings between rooms of the same temperature

R 1.44 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
U 0.69 W/m²K	
28 dB	Calculated value in accordance with DIN 4109 on solid ceilings

51–71 kg/m²	
q_k ≤ 2.0 kN/m²	
Q_k ≤ 1.0 kN	

Category	EN 1991	EN 1991/NA	SIA 261
	-	✓ A2 A3	-
	-	-	-
	-	-	-

1m, max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	This construction applies for apartment ceilings with rooms of the same temperature, additional thermal insulation is not required
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm) Mineral wool manufacturer: Isover EP3 or Rockwool Floorrock GP

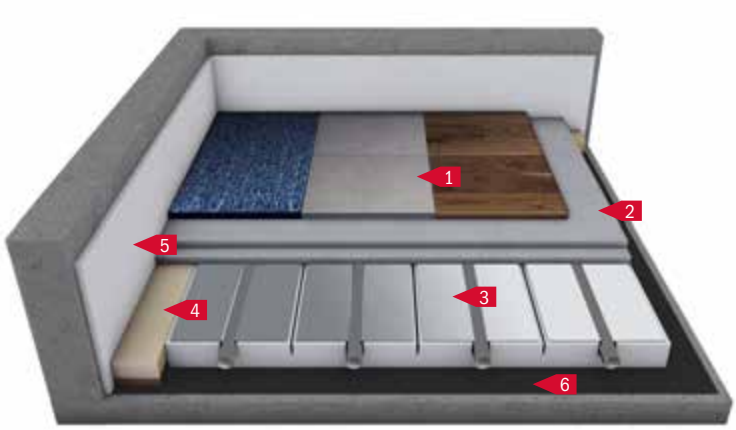
Thermal output: TE25
See product data sheets and detailed information

TE25 04

Dry screed element (Knauf Brio 23 mm)

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Dry screed element (Knauf Brio)	23 mm
3	Heating element EPS + system pipe	30 mm
4	Edge board (30 mm), use recommended	
5	Edge insulation strip	
6	Moisture barrier if applicable	
		53 mm



Ceilings between rooms of the same temperature

R > 0.82 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
U < 1.22 W/m²K	
18 dB	Calculated value in accordance with DIN 4109 on solid ceilings

38–58 kg/m²	
q_k ≤ 3.0 kN/m²	
Q_k ≤ 2.0 kN	

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	-
	-	-	-

1m, max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	This construction applies for apartment ceilings with rooms of the same temperature, additional thermal insulation is not required
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm)

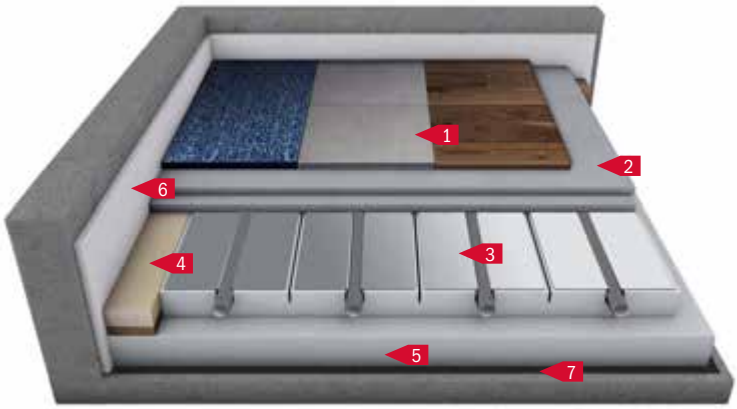
Thermal output: TE25
See product data sheets and detailed information

TE25 05

Dry screed element (Knauf Brio 23 mm) with additional insulation

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Dry screed element (Knauf Brio)	23 mm
3	Heating element EPS + system pipe	30 mm
4	Edge board (30 mm), use recommended	
5	Additional insulation EPS 035 DEO, 200 kPa	40 mm
6	Edge insulation strip	
7	Moisture barrier if applicable	
		93 mm



Ceilings against unheated rooms/ground

R	2.00 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met (as of 20 mm additional insulation)	39–59 kg/m²
U	0.50 W/m²K	EnEV 2009: U_{max} Old building 0.5 W/m²K (→ 40 mm EPS 035) $U_{reference}$ New building 0.35 W/m²K (→ 60 mm EPS 035)	≤ 3.0 kN/m²
	18 dB	Calculated value in accordance with DIN 4109 on solid ceilings	≤ 2.0 kN * ≥ 20 cm²

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	-
	-	-	-

1m, max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	Building waterproofing in accordance with DIN 18195 exists under the concrete slab in structures against the ground, otherwise must be applied on the raw floor
	New building: DIN EN 1264 → min. 20 mm EPS 035 DEO, 200 kPa; EnEV 2009 → reference: 60 mm XPS 500 kPa Old building: EnEV 2009 → min. 40 mm XPS 035 DEO, 500 kPa (exception: EnEV 2009 Appendix 3 No. 5e) As concrete bases are usually insulated, additional thermal insulation can be omitted or reduced
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm)

Thermal output: TE25
See product data sheets and detailed information

TE25 06

Dry screed element (Knauf Aquapanel 22 mm)

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Dry screed element (Knauf Aquapanel)	22 mm
3	Heating element EPS + system pipe	30 mm
4	Edge board (30 mm), use recommended	
5	Edge insulation strip	
6	Moisture barrier if applicable	
		52 mm

Ceilings between rooms of the same temperature

R > 0.82 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
U < 1.22 W/m²K	
18 dB	Calculated value in accordance with DIN 4109 on solid ceilings

46-66 kg/m²	
q_k ≤ 3.0 kN/m²	
Q_k ≤ 3.0 kN	

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1 A2
	-	✓ B1 D1	✓ B
	-	✓ B2	-

1m, max. 3mm	Flat, smooth and load-bearing subsurface required (higher requirements in accordance with DIN 18202 tab. 3, row 4)
	This construction applies for apartment ceilings with rooms of the same temperature, additional thermal insulation is not required
	The details for the permitted individual load (Q_k) relate to a load area of at least 20 cm² (pressure stamp Ø = 5 cm)

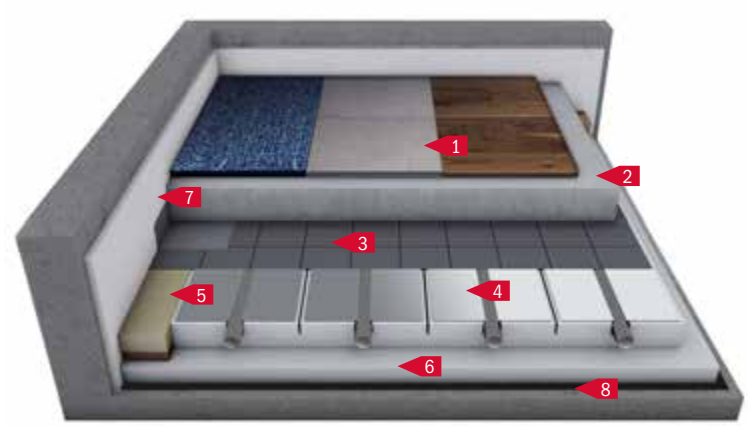
Thermal output: TE25
See product data sheets and detailed information

CT 01

Cement screed CT-F5 with impact sound insulation

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Cement screed (≥ CT-F5)	55 mm
3	Separating layer	
4	Heating element EPS + system pipe	30 mm
5	Optional edge board (30 mm)	
6	Impact sound insulation EPS 040 DES, 20-2	20 mm
7	Edge insulation strip	
8	Moisture barrier if applicable	
		105 mm



Ceilings between rooms of the same temperature

R > 1.32 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
U < 0.76 W/m²K	
≥ 26 dB	Calculated value in accordance with DIN 4109 on solid ceilings

120-140 kg/m²	
q_k ≤ 3.0 kN/m²	
Q_k ≤ 2.0 kN	

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	✓ B
	-	-	-

This construction applies for apartment ceilings with rooms of the same temperature, additional thermal insulation is not required

Minimum screed thickness of quality CT-F4: 65 mm

EN 1991/NA Category A2 A3: Nominal thicknesses for area loads ≤ 2kN/m² and individual loads: ≤ 1kN → CT -F4: ≥ 45 mm; CT- F5: ≥ 40 mm

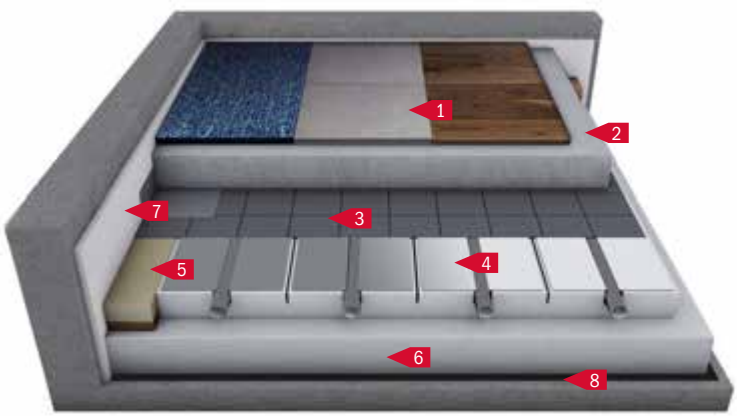
Thermal output: CT
See product data sheets and detailed information

CT 02

Cement screed CT-F5 with additional insulation

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Cement screed (≥ CT-F5)	55 mm
3	Separating layer	
4	Heating element EPS + system pipe	30 mm
5	Optional edge board (30 mm)	
6	Additional insulation EPS 040 DEO, 100 kPa	50 mm
7	Edge insulation strip	
8	Moisture barrier if applicable	
		135 mm



Ceilings against unheated rooms/ground

R > 2.07 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
U < 0.48 W/m²K	EnEV 2009: U_{max} Old building 0.5 W/m²K (→ 50 mm EPS 040) $U_{reference}$ New building 0.35 W/m²K (→ 80 mm EPS 040)
The universal panel UP (EPS DEO) is thermal insulation without defined impact sound insulation	

121-141 kg/m²	
q_k ≤ 3.0 kN/m²	
Q_k ≤ 2.0 kN	

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	✓ B
	-	-	-

	Building waterproofing in accordance with DIN 18195 exists under the concrete slab in structures against the ground, otherwise must be applied on the raw floor
	New building: DIN EN 1264 → min. 20 mm EPS 040 DEO, 100 kPa; EnEV 2009 → reference: 80 mm EPS 040 DEO ≥ 100 kPa Old building: EnEV 2009 → min. 50 mm EPS 040 DEO ≥ 100 kPa (exception: EnEV 2009 Appendix 3 No. 5e) As concrete bases are usually insulated, additional thermal insulation can be omitted or reduced
	Minimum screed thickness of quality CT-F4: 65 mm EN 1991/NA Category A2 A3: Nominal thicknesses for area loads ≤ 2kN/m² and individual loads: ≤ 1kN → CT -F4: ≥ 45 mm; CT- F5: ≥ 40 mm

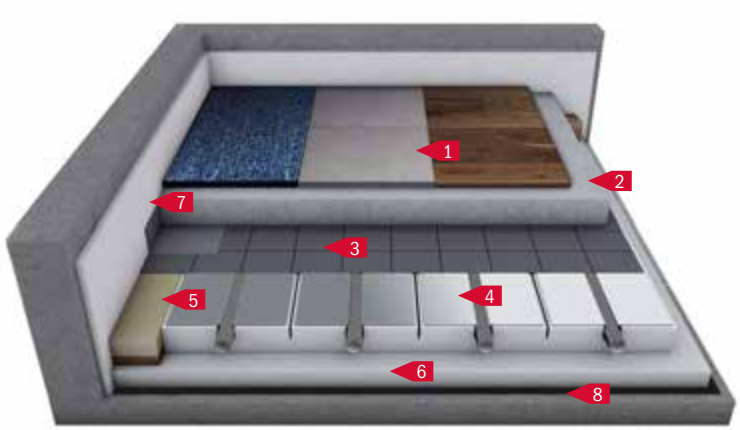
Thermal output: CT
See product data sheets and detailed information

CAF 01

Anhydrite screed CAF-F5 with impact sound insulation

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Anhydrite screed (≥ CAF-F5)	≥ 40 mm
3	Separating layer	
4	Heating element EPS + system pipe	30 mm
5	Optional edge board (30 mm)	
6	Impact sound insulation EPS 040 DES, 20-2	20 mm
7	Edge insulation strip	
8	Moisture barrier if applicable	
		≥ 90 mm



Ceilings between rooms of the same temperature

R > 1.32 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
U < 0.76 W/m²K	
≥ 26 dB	Calculated value in accordance with DIN 4109 on solid ceilings

89-109 kg/m²	
q_k ≤ 3.0 kN/m²	
Q_k ≤ 2.0 kN	

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	✓ B
	-	-	-

This construction applies for apartment ceilings with rooms of the same temperature, additional thermal insulation is not required

Minimum screed thickness applies for an insulation compressibility c ≤ 3 mm (individual load: Supporting surface ≥ 50 mm x 50 mm)
→ at c ≤ 5 mm, the screed thickness must be increased by 5 mm

EN 1991/NA Category A2 A3: Nominal thicknesses for area loads ≤ 2kN/m² and individual loads: ≤ 1kN → CAF-F5: ≥ 35 mm

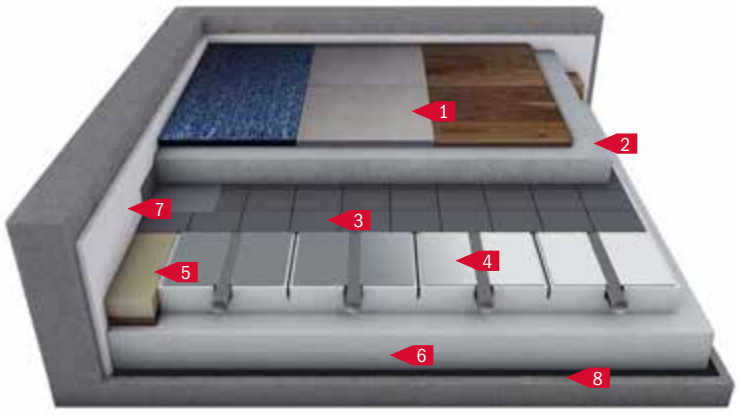
Thermal output: CAF
See product data sheets and detailed information

CAF 02

Anhydrite screed CAF-F5 with additional insulation

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Anhydrite screed (≥ CAF-F5)	≥ 40 mm
3	Separating layer	
4	Heating element EPS + system pipe	30 mm
5	Optional edge board (30 mm)	
6	Additional insulation EPS 040 DEO, 100 kPa	50 mm
7	Edge insulation strip	
8	Moisture barrier if applicable	
		≥ 120 mm



Ceilings against unheated rooms/ground

R > 2.07 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
U < 0.48 W/m²K	EnEV 2009: U_{max} Old building 0.5 W/m²K (→ 50 mm EPS 040) $U_{reference}$ New building 0.35 W/m²K (→ 80 mm EPS 040)
The universal panel UP (EPS DEO) is thermal insulation without defined impact sound insulation	

90-110 kg/m²	
q_k ≤ 3.0 kN/m²	
Q_k ≤ 2.0 kN	

Category	EN 1991	EN 1991/NA	SIA 261
	✓ A	✓ A2 A3	✓ A1
	-	✓ B1 D1	✓ B
	-	-	-

Building waterproofing in accordance with DIN 18195 exists under the concrete slab in structures against the ground, otherwise must be applied on the raw floor

New building: DIN EN 1264 → min. 20 mm EPS 040 DEO, 100 kPa; EnEV 2009 → reference: 80 mm EPS 040 DEO ≥ 100 kPa
Old building: EnEV 2009 → min. 50 mm EPS 040 DEO ≥ 100 kPa (exception: EnEV 2009 Appendix 3 No. 5e)

As concrete bases are usually insulated, additional thermal insulation can be omitted or reduced

Minimum screed thickness applies for an insulation compressibility c ≤ 3 mm (individual load: Supporting surface ≥ 50 mm x 50 mm)
→ at c ≤ 5 mm, the screed thickness must be increased by 5 mm

EN 1991/NA Category A2 A3: Nominal thicknesses for area loads ≤ 2kN/m² and individual loads: ≤ 1kN → CAF-F5: ≥ 35 mm

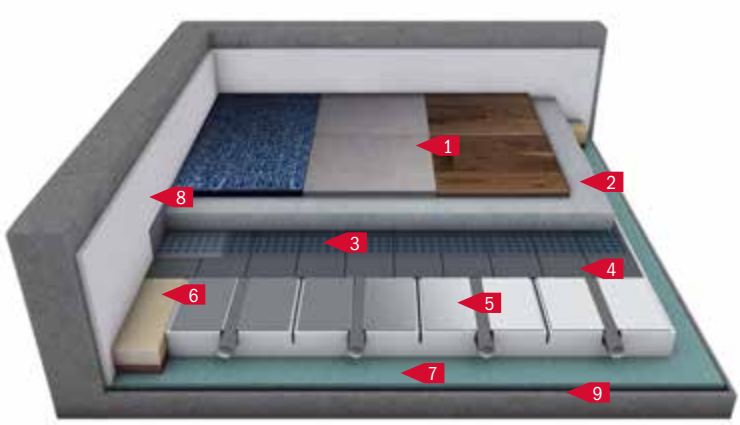
Thermal output: CAF
See product data sheets and detailed information

CAF 03

Thin screed

TECEfloor universal panel UP

1	Carpet/tiles/parquet/laminate/plastic	
2	Thin screed (weber.floor 4310)	≥ 25 mm
3	System fabric 4945	
4	Separating layer	
5	Heating element EPS + system pipe	30 mm
6	Optional edge board (30 mm)	
7	Impact sound insulation strip 8/6 mm	6 mm
8	Edge insulation strip	
9	Moisture barrier if applicable	
		≥ 61 mm



Ceilings between rooms of the same temperature

R > 0.93 m²K/W	Minimum thermal resistance in accordance with DIN EN 1264 met
U < 1.07 W/m²K	
≥ 24 dB	Calculated value in accordance with DIN 4109 on solid ceilings

57–77 kg/m²	
q_k ≤ 2.0 kN/m²	
Q_k ≤ 1.0 kN	

Category	EN 1991	EN 1991/NA	SIA 261
	-	✓ A2 A3	-
	-	-	-
	-	-	-

This construction applies for apartment ceilings with rooms of the same temperature, additional thermal insulation is not required

Minimum screed thickness applies for an insulation compressibility c ≤ 3 mm

The fibre-reinforced thin screed can be walked on after 24 hours and can support objects after a special heating protocol (starting after 7 days), seal the surface with weber.floor 4790 24 hours before heating, rubbing down not required

Alternative screed: Fast-drying thin screed weber.floor 4320 (sealing after 24 hours, heating after a further 24 hours)

Thermal output: CAF
See product data sheets and detailed information

Performance tables

Specific heating output

Specific cooling

DA

Separating board UP | Tiles | Laminate

Thermal output TECEfloor universal panel UP

Nominal layer thickness	5 mm
Thermal conductivity λ	0.2 W/mK
spread σ	5 K

		Floor covering Rλ,B = 0.00 m² K/W Tiles				Floor covering Rλ,B = 0.015 m² K/W Tiles				Floor covering Rλ,B = 0.05 m² K/W Laminate			
Mean heating water temperature	Room temperature	RA = 125 mm	surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature
θm	θi	EZ	θF	RZ	θF	EZ	θF	RZ	θF	EZ	θF	RZ	θF
°C	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C
30	15	100.6	24.0	75.6	22.0	89.9	23.2	69.1	21.4	63.5	21.0	49.9	19.8
30	18	80.1	25.3	60.2	23.7	71.5	24.6	55.0	23.2	50.5	22.8	39.7	21.9
30	20	66.3	26.2	49.8	24.8	59.2	25.6	45.5	24.4	41.8	24.1	32.9	23.3
30	22	52.3	27.0	39.4	25.9	46.8	26.5	36.0	25.6	33.0	25.3	26.0	24.6
30	24	38.1	27.7	28.7	26.9	34.1	27.4	26.2	26.7	24.1	26.5	18.9	26.0
35	15	134.7	15.0	101.3	24.1	120.4	25.6	92.6	23.4	85.0	22.8	66.8	21.2
35	18	114.3	28.2	85.9	25.8	102.1	27.2	78.5	25.2	72.1	24.7	56.7	23.4
35	20	100.6	29.0	75.6	27.0	89.9	28.2	69.1	26.4	63.5	26.0	49.9	24.8
35	22	86.9	29.9	65.3	28.1	77.7	29.2	59.7	27.6	54.8	27.2	43.1	26.2
35	24	73.2	30.8	55.0	29.2	65.4	30.1	50.3	28.8	46.1	28.5	36.3	27.6
40	15	168.7	29.5	126.8	26.2	150.7	28.1	115.9	25.3	106.4	24.5	83.7	22.7
40	18	148.3	30.9	111.5	27.9	132.5	29.6	101.9	27.2	93.5	26.5	73.6	24.8
40	20	134.7	31.8	101.3	29.1	120.4	30.6	92.6	28.4	85.0	27.8	66.8	26.2
40	22	121.1	32.7	91.0	30.3	108.2	31.7	83.2	29.6	76.4	29.0	60.1	27.7
40	24	107.4	33.6	80.8	31.4	96.0	32.7	73.8	30.8	67.8	30.3	53.3	29.1
45	15	202.6	32.1	152.3	28.2	181.1	30.4	139.3	27.2	127.8	26.2	100.6	24.0
45	18	182.3	33.5	137.0	30.0	162.9	32.0	125.3	29.0	115.0	28.2	90.5	26.2
45	20	168.7	34.5	126.8	31.2	150.7	33.1	115.9	30.3	106.4	29.5	83.7	27.7
45	22	155.1	35.4	116.6	32.3	138.6	34.1	106.6	31.5	97.8	30.8	77.0	29.1
45	24	141.5	36.3	106.4	33.5	126.4	35.1	97.2	32.8	89.2	32.1	70.2	30.5
50	15	236.5	34.7	177.8	30.2	211.4	32.8	162.6	29.0	149.2	27.9	117.4	25.4
50	18	216.2	36.1	162.5	32.0	193.2	34.4	148.6	30.9	136.4	29.9	107.3	27.6
50	20	202.6	37.1	152.3	33.2	181.1	35.4	139.3	32.2	127.8	31.2	100.6	29.0
50	22	189.1	38.1	142.1	34.4	168.9	36.5	129.9	33.4	119.2	32.6	93.8	30.5
50	24	175.5	39.0	131.9	35.6	156.8	37.5	120.6	34.7	110.7	33.9	87.1	31.9
55	15	270.4	37.2	203.3	32.2	241.7	35.1	185.9	30.8	170.6	29.6	134.2	26.8
55	18	250.1	38.7	188.0	34.0	223.5	36.7	171.9	32.7	157.7	31.6	124.1	29.0
55	20	236.5	39.7	177.8	35.2	211.4	37.8	162.6	34.0	149.2	32.9	117.4	30.4
55	22	223.0	40.7	167.6	36.4	199.3	38.8	153.3	35.3	140.6	34.3	110.7	31.9
55	24	209.4	41.6	157.4	37.6	187.1	39.9	143.9	36.5	132.1	35.6	103.9	33.3

Thermal output on the basis of DIN EN 1264

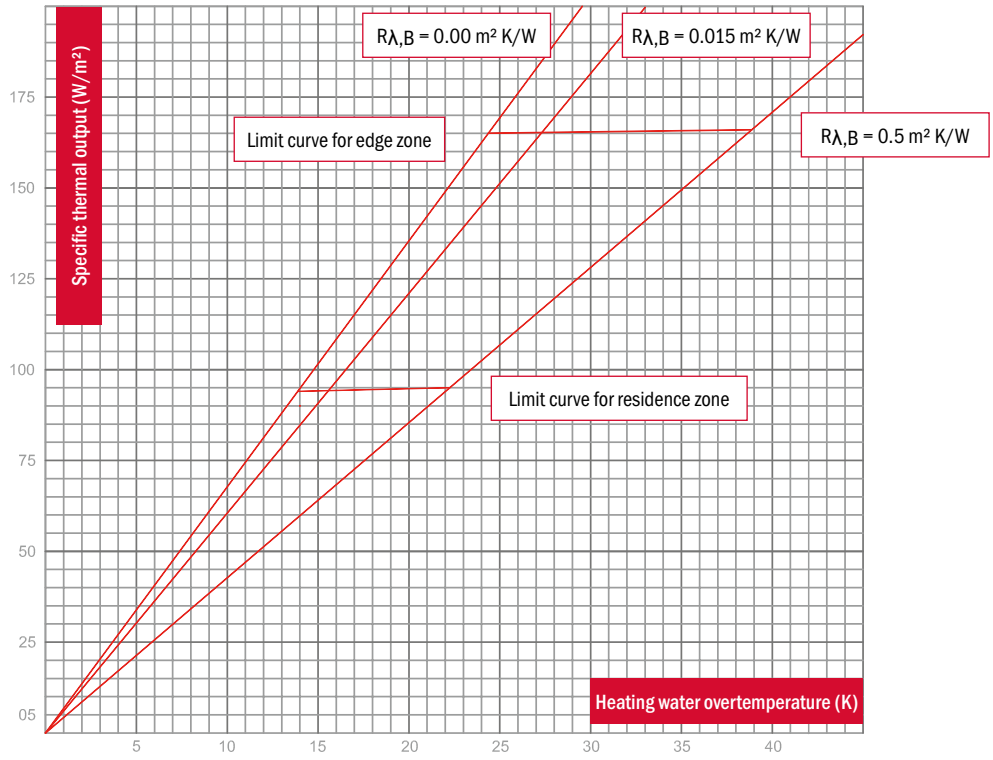
Maximum surface temperatures in accordance with DIN EN 1264
Residence zone (RZ): 29 °C | Bathrooms: 33° C | Edge zone (EZ, max. width 100 cm): 35° C

Construction: DA 01, DA 02, DA 04, DA 05
See product data sheets and detailed information

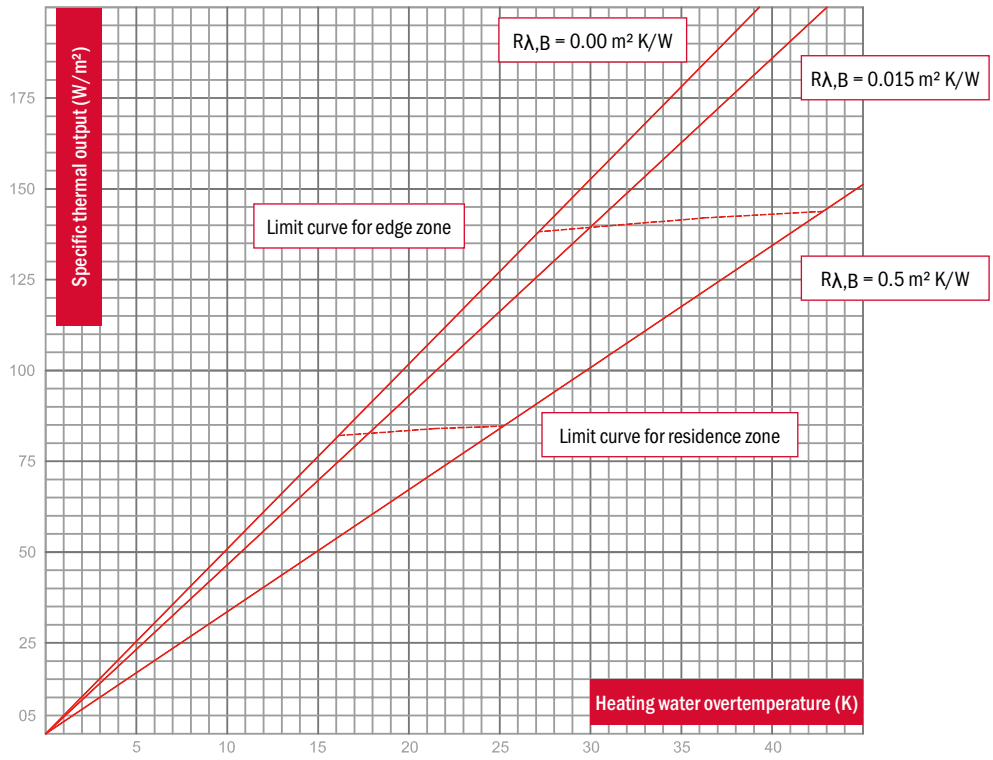
Separating board UP | Tiles | Laminate

Design chart TECEfloor universal panel UP

Laying type	125 mm
Thermal conductivity λ	0.2 W/mK



Laying type	250 mm
Thermal conductivity λ	0.2 W/mK



Construction: DA 01, DA 02, DA 04, DA 05
See product data sheets and detailed information

DP

Direct laying of parquet | Solid floorboards on floor battens

Thermal output TECEfloor universal panel UP

Nominal layer thickness	15 – 20 mm
Thermal conductivity λ	0.13 W/mK
spread σ	5 K

		Floor covering $R_{\lambda,B}$ = 0.13 m² K/W **Parquet 15 mm** (incl. 2 mm cork strip)				Floor covering $R_{\lambda,B}$ = 0.22 m² K/W **Parquet 20 mm** ($R_{\lambda,B} > R_{\lambda,Bmax}$ in accordance with DIN EN 1264)				Floor covering $R_{\lambda,B}$ = 0.15 m² K/W **Solid floorboards 20 mm**			
Mean heating water temperature	Room temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature
θ_m	θ_i	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F
°C	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C
30	15	50.5	16.6	40.3	18.9	42.2	19.1	34.5	18.4	45.5	19.4	36.2	18.6
30	18	40.2	19.9	32.0	21.2	33.6	21.3	27.4	20.8	36.2	21.6	28.8	20.9
30	20	33.3	22.1	26.5	22.7	27.8	22.8	22.7	22.3	30.0	23.0	23.9	22.4
30	22	26.3	24.3	21.0	24.2	22.0	24.3	17.9	23.9	23.7	24.4	18.9	24.0
30	24	19.2	26.5	15.3	25.6	16.0	25.7	13.1	25.4	17.2	25.8	13.7	25.5
35	15	67.6	16.6	53.9	20.1	56.5	20.4	46.2	19.5	60.9	20.7	48.5	19.7
35	18	57.4	19.9	45.7	22.4	47.9	22.6	39.2	21.8	51.6	22.9	41.2	22.0
35	20	50.5	22.1	40.3	23.9	42.2	24.1	34.5	23.4	45.5	24.4	36.2	23.6
35	22	43.6	24.3	34.8	25.4	36.5	25.6	29.8	25.0	39.3	25.8	31.3	25.1
35	24	36.7	26.5	29.3	26.9	30.7	27.1	25.1	26.6	33.1	27.3	26.4	26.7
40	15	84.7	16.6	67.5	21.3	70.8	21.6	57.8	20.5	76.2	22.0	60.8	20.7
40	18	74.5	19.9	59.4	23.6	62.2	23.8	50.8	22.9	67.0	24.3	53.4	23.1
40	20	67.6	22.1	53.9	25.1	56.5	25.4	46.2	24.5	60.9	25.7	48.5	24.7
40	22	60.8	24.3	48.5	26.7	50.8	26.9	41.5	26.0	54.7	27.2	43.6	26.2
40	24	54.0	26.5	43.0	28.2	45.1	28.4	36.8	27.6	48.6	28.7	38.7	27.8
45	15	101.8	16.6	81.1	22.4	85.0	22.8	69.4	21.5	91.6	23.3	73.0	21.8
45	18	91.5	19.9	73.0	24.8	76.5	25.0	62.5	23.9	82.4	25.5	65.7	24.1
45	20	84.7	22.1	67.5	26.3	70.8	26.6	57.8	25.5	76.2	27.0	60.8	25.7
45	22	77.9	24.3	62.1	27.8	65.1	28.1	53.1	27.1	70.1	28.5	55.9	27.3
45	24	71.1	26.5	56.6	29.4	59.4	29.6	48.5	28.7	64.0	30.0	51.0	28.9
50	15	118.8	16.6	94.7	23.6	99.2	23.9	81.1	22.4	106.9	24.6	85.2	22.8
50	18	108.6	19.9	86.5	25.9	90.7	26.2	74.1	24.9	97.7	26.8	77.9	25.2
50	20	101.8	22.1	81.1	27.4	85.0	27.8	69.4	26.5	91.6	28.3	73.0	26.8
50	22	94.9	24.3	75.7	29.0	79.3	29.3	64.8	28.1	85.5	29.8	68.1	28.3
50	24	88.1	26.5	70.2	30.5	73.6	30.8	60.1	29.7	79.3	31.3	63.2	29.9
55	15	135.8	16.6	108.3	24.7	113.5	25.1	92.7	23.4	122.2	25.8	97.4	23.8
55	18	125.6	19.9	100.1	27.0	104.9	27.4	85.7	25.8	113.0	28.1	90.1	26.2
55	20	118.8	22.1	94.7	28.6	99.2	28.9	81.1	27.4	106.9	29.6	85.2	27.8
55	22	112.0	24.3	89.3	30.1	93.5	30.5	76.4	29.0	100.8	31.1	80.3	29.4
55	24	105.2	26.5	83.8	31.7	87.8	32.0	71.8	30.7	94.7	32.6	75.4	31.0

Thermal output on the basis of DIN EN 1264

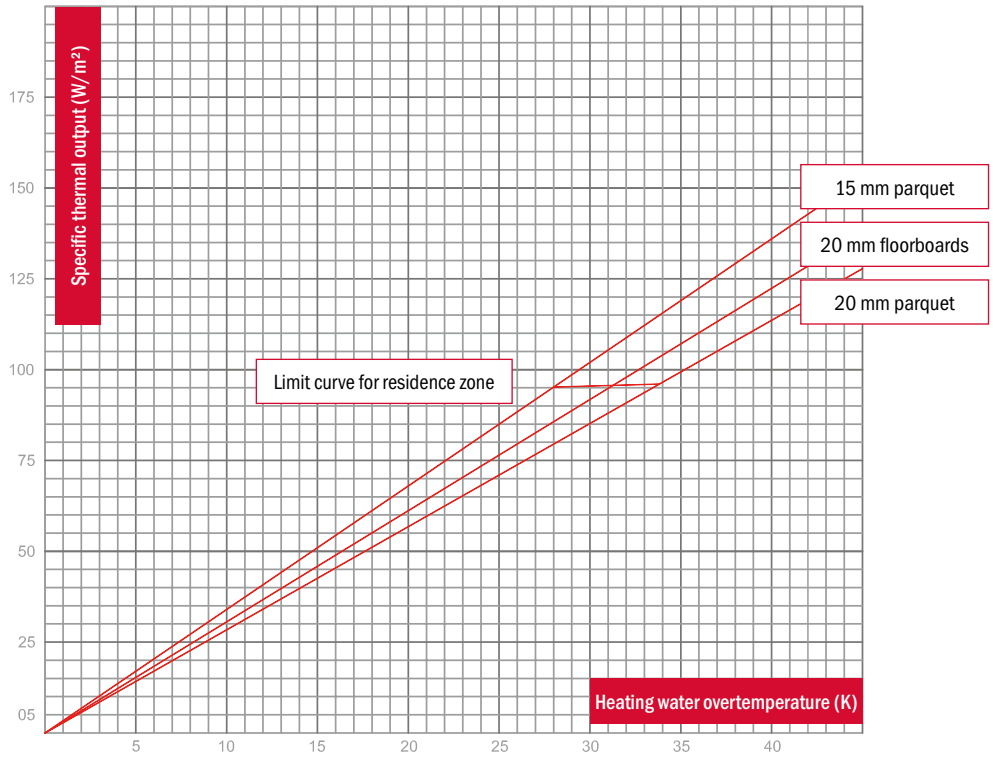
Maximum surface temperatures in accordance with DIN EN 1264
Residence zone (RZ): 29 °C | Bathrooms: 33° C | Edge zone (EZ, max. width 100 cm): 35° C

Construction: DP 01, DP 02, DP 03, DP 04
See product data sheets and detailed information

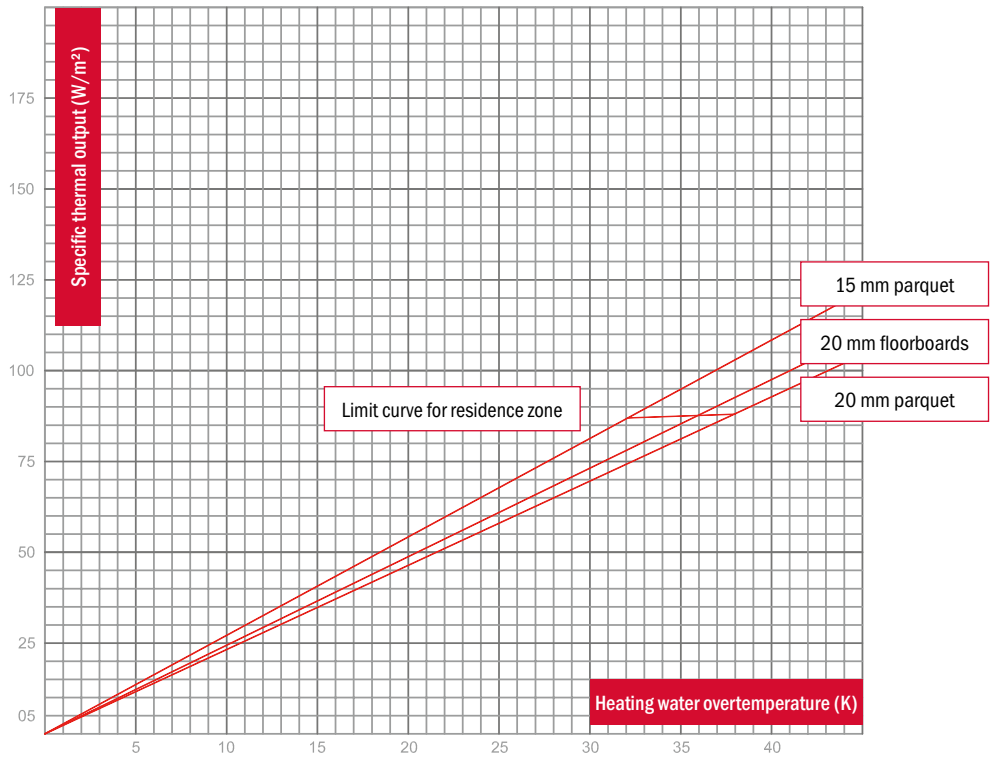
Direct laying of parquet | Solid floorboards on floor battens

Design chart TECEfloor universal panel UP

Laying type	125 mm
Thermal conductivity λ	0.13 W/mK



Laying type	250 mm
Thermal conductivity λ	0.13 W/mK



Construction: DP 01, DP 02, DP 03, DP 04
See product data sheets and detailed information

TE20

Dry screed element (FermacellI 20 mm)

Thermal output TECEfloor universal panel UP

Nominal layer thickness	20 mm
Thermal conductivity λ	0.28 W/mK
spread σ	5 K

		Floor covering Rλ,B = 0.00 m² K/W **Tiles**				Floor covering Rλ,B = 0.05 m² K/W **Parquet, laminate, man-made fibres**				Floor covering Rλ,B = 0.10 m² K/W **Carpet**				Floor covering Rλ,B = 0.15 m² K/W **Velour, ready-to-lay parquet, floorboards**			
Mean heating water temperature	**Room temperature**	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature
θm	θi	EZ	θF	RZ	θF	EZ	θF	RZ	θF	EZ	θF	RZ	θF	EZ	θF	RZ	θF
°C	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C
30	15	74.6	21.9	57.7	20.5	57.7	20.5	46.5	19.5	47.0	19.5	38.9	18.8	39.7	18.9	33.4	18.3
30	18	59.4	23.6	45.9	22.4	45.9	22.4	37.0	21.6	37.4	21.7	31.0	21.1	31.6	21.2	26.6	20.7
30	20	49.1	24.7	38.0	23.7	38.0	23.7	30.6	23.1	30.9	23.1	25.6	22.6	26.1	22.7	22.0	22.3
30	22	38.8	25.8	30.0	25.0	30.0	25.0	24.2	24.5	24.4	24.5	20.3	24.1	20.6	24.1	17.4	23.8
30	24	28.3	26.9	21.9	26.3	21.9	26.3	17.6	25.9	17.8	25.9	14.8	25.6	15.0	25.6	12.7	25.4
35	15	99.9	24.0	77.2	22.1	77.2	22.1	62.3	20.8	62.9	20.9	52.1	20.0	53.1	20.1	44.8	19.3
35	18	84.7	25.7	65.5	24.1	65.5	24.1	52.8	23.0	53.3	23.1	44.2	22.3	45.1	22.4	38.0	21.7
35	20	74.6	26.9	57.7	25.5	57.7	25.5	46.5	24.5	47.0	24.5	38.9	23.8	39.7	23.9	33.4	23.3
35	22	64.4	28.0	49.8	26.8	49.8	26.8	40.2	25.9	40.6	26.0	33.6	25.3	34.3	25.4	28.9	24.9
35	24	54.3	29.2	41.9	28.1	41.9	28.1	33.8	27.4	34.2	27.4	28.3	26.9	28.9	26.9	24.3	26.5
40	15	125.1	26.0	96.7	23.7	96.7	23.7	78.0	22.2	78.7	22.2	65.3	21.1	66.5	21.2	56.1	20.3
40	18	110.0	27.8	85.0	25.8	85.0	25.8	68.6	24.4	69.2	24.4	57.4	23.4	58.5	23.5	49.3	22.7
40	20	99.9	29.0	77.2	27.1	77.2	27.1	62.3	25.8	62.9	25.9	52.1	25.0	53.1	25.1	44.8	24.3
40	22	89.8	30.2	69.4	28.5	69.4	28.5	56.0	27.3	56.5	27.4	46.9	26.5	47.7	26.6	40.2	25.9
40	24	79.7	31.3	61.6	29.8	61.6	29.8	49.7	28.8	50.1	28.8	41.6	28.1	42.4	28.1	35.7	27.5
45	15	150.3	28.0	116.1	25.3	116.1	25.3	93.7	23.5	94.6	23.6	78.4	22.2	79.9	22.3	67.3	21.3
45	18	135.2	29.8	104.5	27.4	104.5	27.4	84.3	25.7	85.1	25.8	70.5	24.6	71.9	24.7	60.6	23.7
45	20	125.1	31.0	96.7	28.7	96.7	28.7	78.0	27.2	78.7	27.2	65.3	26.1	66.5	26.2	56.1	25.3
45	22	115.0	32.2	88.9	30.1	88.9	30.1	71.7	28.6	72.4	28.7	60.0	27.7	61.2	27.8	51.5	26.9
45	24	104.9	33.4	81.1	31.4	81.1	31.4	65.4	30.1	66.0	30.2	54.8	29.2	55.8	29.3	47.0	28.5
50	15	175.4	30.0	135.6	26.9	135.6	26.9	109.4	24.8	110.4	24.8	91.5	23.3	93.3	23.4	78.6	22.2
50	18	160.3	31.8	123.9	28.9	123.9	28.9	100.0	27.0	100.9	27.1	83.7	25.7	85.3	25.8	71.9	24.7
50	20	150.3	33.0	116.1	30.3	116.1	30.3	93.7	28.5	94.6	28.6	78.4	27.2	79.9	27.3	67.3	26.3
50	22	140.2	34.2	108.4	31.7	108.4	31.7	87.4	30.0	88.2	30.0	73.2	28.8	74.6	28.9	62.8	27.9
50	24	130.1	35.4	100.6	33.0	100.6	33.0	81.1	31.4	81.9	31.5	67.9	30.3	69.2	30.4	58.3	29.5
55	15	200.5	31.9	155.0	28.4	155.0	28.4	125.0	26.0	126.2	26.1	104.7	24.4	106.7	24.5	89.9	23.2
55	18	185.5	33.8	143.3	30.5	143.3	30.5	115.6	28.3	116.7	28.4	96.8	26.7	98.6	26.9	83.1	25.6
55	20	175.4	35.0	135.6	31.9	135.6	31.9	109.4	29.8	110.4	29.8	91.5	28.3	93.3	28.4	78.6	27.2
55	22	165.3	36.2	127.8	33.2	127.8	33.2	103.1	31.2	104.1	31.3	86.3	29.9	87.9	30.0	74.1	28.9
55	24	155.3	37.4	120.0	34.6	120.0	34.6	96.8	32.7	97.7	32.8	81.0	31.4	82.6	31.6	69.6	30.5

Thermal output on the basis of DIN EN 1264

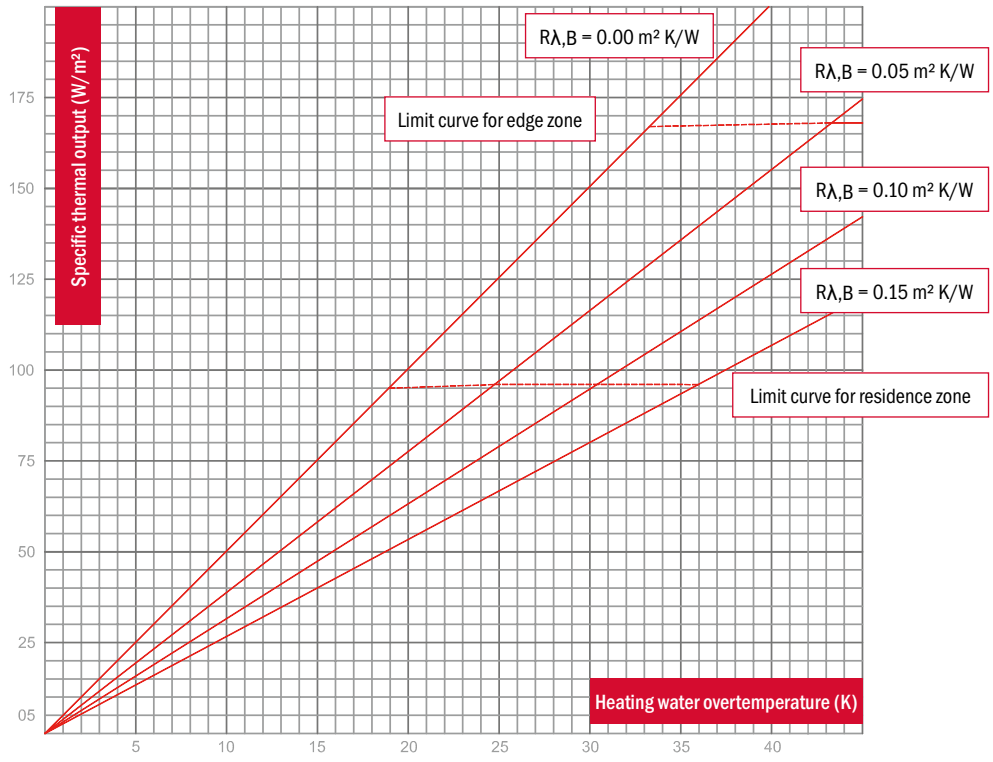
Maximum surface temperatures in accordance with DIN EN 1264
Residence zone (RZ): 29 °C | Bathrooms: 33° C | Edge zone (EZ, max. width 100 cm): 35° C

Construction: TE20 01, TE20 02, TE20 03, TE20 04
See product data sheets and detailed information

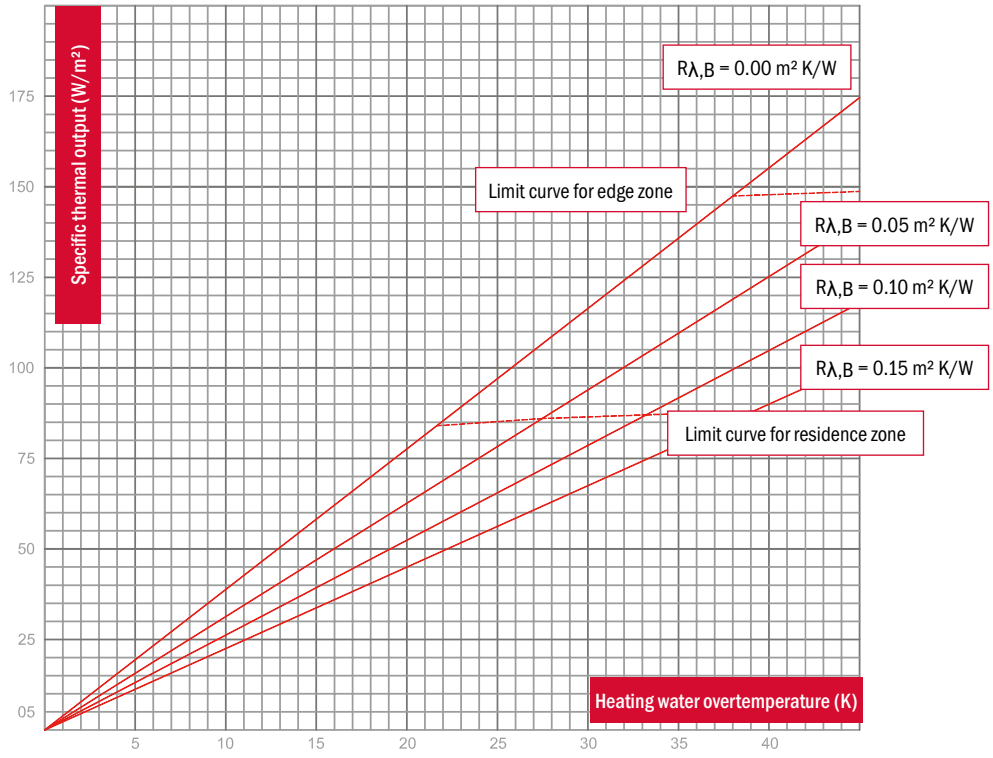
Dry screed element (Fermacell 20 mm)

Design chart TECEfloor universal panel UP

Laying type	125 mm
Thermal conductivity λ	0.28 W/mK



Laying type	250 mm
Thermal conductivity λ	0.28 W/mK



Construction: TE20 01, TE20 02, TE20 03, TE20 04
See product data sheets and detailed information

TE25

Dry screed element (FermacellI 25 mm)

Thermal output TECEfloor universal panel UP

Nominal layer thickness	25 mm
Thermal conductivity λ	0.28 W/mK
spread σ	5 K

		Floor covering $R_{\lambda,B}$ = 0.00 m² K/W **Tiles**				Floor covering $R_{\lambda,B}$ = 0.05 m² K/W **Parquet, laminate, man-made fibres**				Floor covering $R_{\lambda,B}$ = 0.10 m² K/W **Carpet**				Floor covering $R_{\lambda,B}$ = 0.15 m² K/W **Velour, ready-to-lay parquet, floorboards**			
Mean heating water temperature	**Room temperature**	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature
θ_m	θ_i	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F
°C	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C
30	15	67.5	21.3	52.6	20.0	53.2	20.1	43.1	19.2	44.0	19.3	36.6	18.6	37.6	18.7	31.7	18.2
30	18	53.7	23.1	41.9	22.1	42.3	22.1	34.3	21.4	35.0	21.5	29.1	20.9	29.9	21.0	25.2	20.6
30	20	44.4	24.3	34.6	23.4	35.0	23.5	28.4	22.9	29.0	22.9	24.1	22.5	24.8	22.5	20.8	22.2
30	22	35.1	25.5	27.4	24.8	34.9	25.5	22.4	24.3	22.9	24.4	19.0	24.0	19.6	24.0	16.5	23.7
30	24	25.6	26.6	19.9	26.1	20.2	26.1	16.3	25.7	16.7	25.8	13.9	25.5	14.3	25.5	12.0	25.3
35	15	90.3	23.2	70.4	21.5	71.2	21.6	57.7	20.5	58.9	20.6	48.9	19.7	50.3	19.8	42.4	19.1
35	18	76.6	25.1	59.7	23.6	60.4	23.7	48.9	22.7	50.0	22.8	41.5	22.0	42.7	22.2	35.9	21.5
35	20	67.5	26.3	52.6	25.0	53.2	25.1	43.1	24.2	44.0	24.3	36.6	23.6	37.6	23.7	31.7	23.2
35	22	58.3	27.5	45.4	26.4	46.0	26.4	37.2	25.7	38.0	25.7	31.6	25.2	32.5	25.2	27.3	24.8
35	24	49.1	28.7	38.3	27.8	38.7	27.8	31.3	27.1	32.0	27.2	26.6	26.7	27.3	26.8	23.0	26.4
40	15	113.1	25.1	88.2	23.0	89.2	23.1	72.3	21.7	73.8	21.8	61.3	20.8	63.0	20.9	53.1	20.1
40	18	99.4	27.0	77.5	25.1	78.4	25.2	63.5	24.0	64.8	24.1	53.9	23.1	55.4	23.3	46.7	22.5
40	20	90.3	28.2	70.4	26.5	71.2	26.6	57.7	25.5	58.9	25.6	48.9	24.7	50.3	24.8	42.4	24.1
40	22	81.2	29.4	63.3	27.9	64.0	28.0	51.9	27.0	52.9	27.0	44.0	26.3	45.2	26.4	38.1	25.7
40	24	72.0	30.7	56.2	29.3	56.8	29.4	46.0	28.4	47.0	28.5	39.0	27.8	40.1	27.9	33.8	27.4
45	15	135.9	26.9	106.0	24.5	107.2	24.6	86.8	22.9	88.6	23.1	73.6	21.8	75.7	22.0	63.8	21.0
45	18	122.2	28.8	95.3	26.6	96.4	26.7	78.1	25.2	79.7	25.3	66.2	24.2	68.1	24.3	57.3	23.4
45	20	113.1	30.1	88.2	28.0	89.2	28.1	72.3	26.7	73.8	26.8	61.3	25.8	63.0	25.9	53.1	25.1
45	22	104.0	31.3	81.1	29.4	82.0	29.5	66.4	28.2	67.8	28.3	56.4	27.3	58.0	27.5	48.8	26.7
45	24	94.9	32.6	74.0	30.8	74.8	30.9	60.6	29.7	61.9	29.8	51.4	28.9	52.9	29.0	44.5	28.3
50	15	158.6	28.7	123.7	25.9	125.1	26.0	101.3	24.1	103.4	24.3	86.0	22.8	88.4	23.0	74.4	21.9
50	18	145.0	30.6	113.0	28.1	114.3	28.2	92.6	26.4	94.5	26.5	78.6	25.2	80.8	25.4	68.0	24.3
50	20	135.9	31.9	106.0	29.5	107.2	29.6	86.8	27.9	88.6	28.1	73.6	26.8	75.7	27.0	63.8	26.0
50	22	126.8	33.2	98.9	30.9	100.0	31.0	81.0	29.4	82.7	29.6	68.7	28.4	70.7	28.6	59.5	27.6
50	24	117.7	34.4	91.8	32.3	92.8	32.4	75.2	30.9	76.7	31.1	63.8	30.0	65.6	30.1	55.2	29.2
55	15	181.4	30.5	141.4	27.3	143.0	27.5	115.8	25.3	118.2	25.5	98.3	23.9	101.1	24.1	85.1	22.8
55	18	167.7	32.4	130.8	29.5	132.3	29.6	107.1	27.6	109.4	27.8	90.9	26.2	93.5	26.5	78.7	25.2
55	20	158.6	33.7	123.7	30.9	125.1	31.0	101.3	29.1	103.4	29.3	86.0	27.8	88.4	28.0	74.4	26.9
55	22	149.5	35.0	116.6	32.3	117.9	32.5	95.5	30.6	97.5	30.8	81.0	29.4	83.3	29.6	70.2	28.5
55	24	140.4	36.3	109.5	33.8	110.7	33.9	89.7	32.2	91.6	32.3	76.1	31.0	78.3	31.2	65.9	30.2

Thermal output on the basis of DIN EN 1264

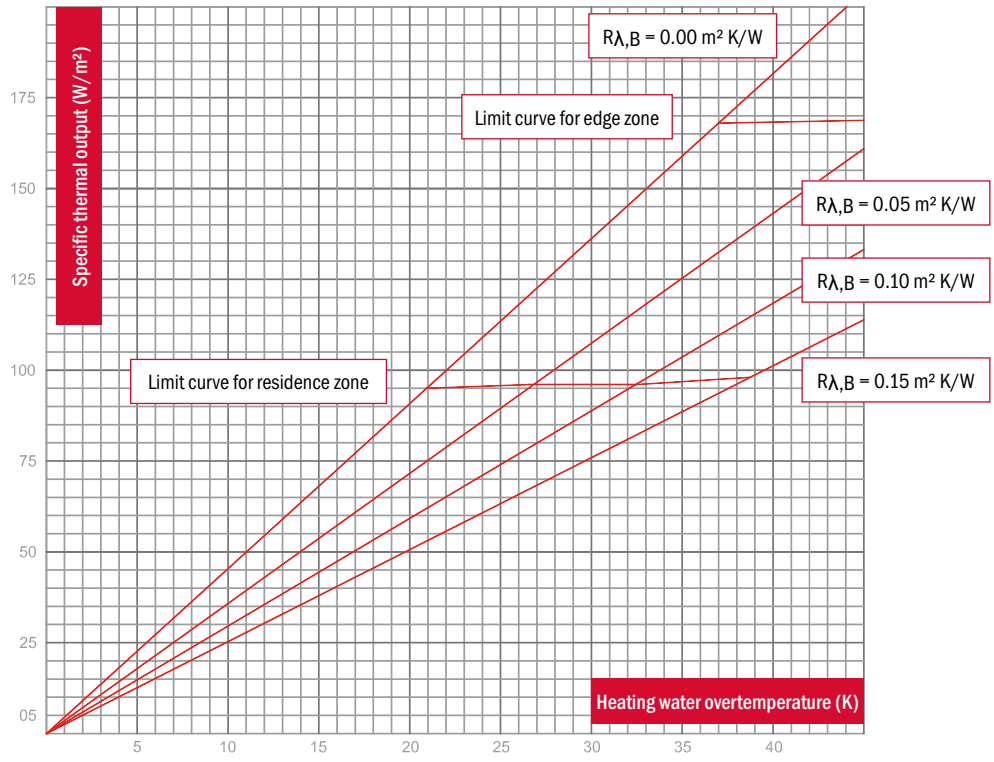
Maximum surface temperatures in accordance with DIN EN 1264
Residence zone (RZ): 29 °C | Bathrooms: 33° C | Edge zone (EZ, max. width 100 cm): 35° C

Construction: TE25 01, TE25 02, TE25 03, TE25 04, TE25 05, TE25 06
See product data sheets and detailed information

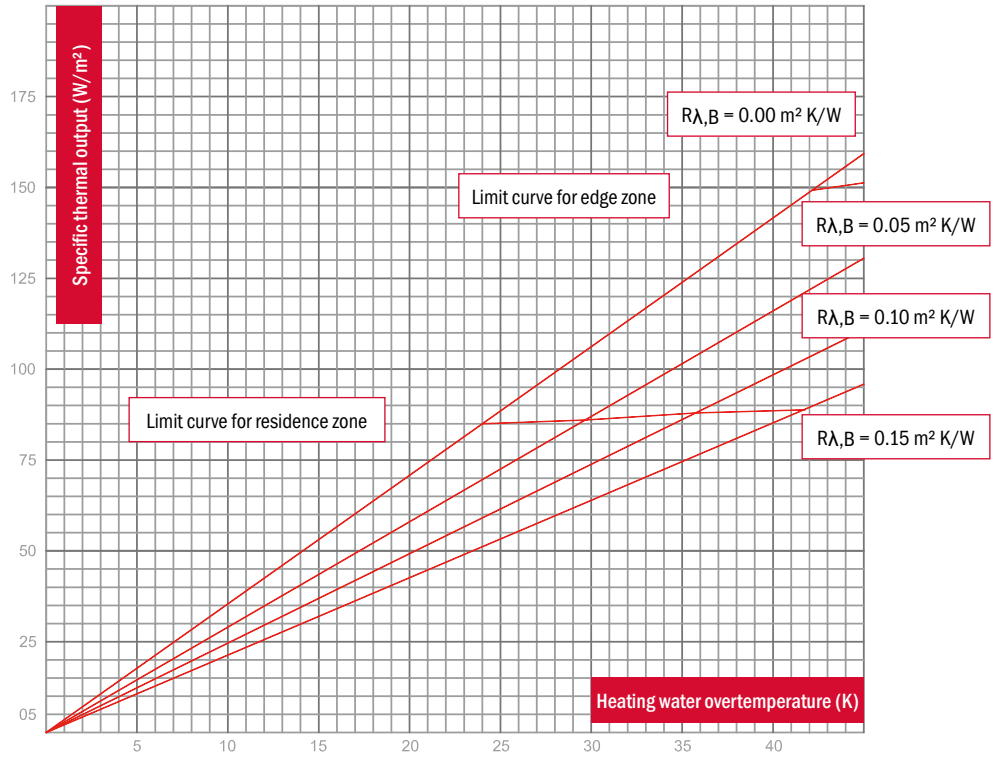
Dry screed element (FermacellI 25 mm)

Design chart TECEfloor universal panel UP

Laying type	125 mm
Thermal conductivity λ	0.28 W/mK



Laying type	250 mm
Thermal conductivity λ	0.28 W/mK



Construction: TE25 01, TE25 02, TE25 03, TE25 04, TE25 05, TE25 06
See product data sheets and detailed information

CT

Cement screed CT

Thermal output TECEfloor universal panel UP

Nominal layer thickness	45 mm
Thermal conductivity λ	1.2 W/mK
spread σ	5 K

		Floor covering Rλ,B = 0.00 m² K/W **Tiles**				Floor covering Rλ,B = 0.05 m² K/W **Parquet, laminate, man-made fibres**				Floor covering Rλ,B = 0.10 m² K/W **Carpet**				Floor covering Rλ,B = 0.15 m² K/W **Velour, ready-to-lay parquet, floorboards**			
Mean heating water temperature	**Room temperature**	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature
θ_m	θ_i	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F
°C	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C
30	15	96.6	23.7	74.6	21.9	69.8	21.5	56.8	20.4	54.8	20.2	45.8	19.4	45.2	19.4	38.5	18.8
30	18	76.9	25.1	59.4	23.6	55.6	23.3	45.2	22.4	43.6	22.2	36.4	21.6	35.9	21.5	30.6	21.1
30	20	63.6	26.0	49.1	24.7	46.0	24.4	37.4	23.7	36.1	23.6	30.1	23.0	29.8	23.0	25.4	22.6
30	22	50.3	26.8	38.8	25.8	34.9	25.5	29.5	25.0	28.5	24.9	23.8	24.4	23.5	24.4	20.0	24.1
30	24	36.6	27.6	28.3	26.9	26.5	26.7	21.5	26.2	20.8	26.2	17.4	25.8	17.1	25.8	14.6	25.6
35	15	129.3	26.4	99.9	24.0	93.5	23.5	76.0	22.0	73.4	21.8	61.3	20.8	60.5	20.7	51.5	19.9
35	18	109.7	27.8	84.7	25.7	79.3	25.3	64.5	24.0	62.3	23.8	52.0	23.0	51.3	22.9	43.7	22.2
35	20	96.6	28.7	74.6	26.9	69.8	26.5	56.8	25.4	54.8	25.2	45.8	24.4	45.2	24.4	38.5	23.8
35	22	83.4	29.6	64.4	28.0	60.3	27.7	49.0	26.7	47.4	26.6	39.5	25.9	39.0	25.8	33.3	25.3
35	24	70.3	30.5	54.3	29.2	50.8	28.9	41.3	28.0	39.9	27.9	33.3	27.3	32.9	27.3	28.0	26.8
40	15	162.0	28.9	125.1	26.0	117.1	25.4	95.2	23.6	91.9	23.3	76.7	22.1	75.7	22.0	64.5	21.0
40	18	142.4	30.4	110.0	27.8	103.0	27.2	83.7	25.7	80.8	25.4	67.5	24.3	66.6	24.2	56.7	23.4
40	20	129.3	31.4	99.9	29.0	93.5	28.5	76.0	27.0	73.4	26.8	61.3	25.8	60.5	25.7	51.5	24.9
40	22	116.2	32.3	89.8	30.2	84.1	29.7	68.3	28.4	66.0	28.2	55.1	27.2	54.4	27.2	46.3	26.5
40	24	103.1	33.3	79.7	31.3	74.6	30.9	60.6	29.7	58.6	29.5	48.9	28.7	48.2	28.6	41.1	28.0
45	15	194.5	31.5	150.3	28.0	140.7	27.3	114.3	25.2	110.4	24.8	92.2	23.4	91.0	23.3	77.5	22.1
45	18	175.0	33.0	135.2	29.8	126.5	29.1	102.8	27.2	99.3	26.9	82.9	25.6	81.8	25.5	69.7	24.5
45	20	162.0	33.9	125.1	31.0	117.1	30.4	95.2	28.6	91.9	28.3	76.7	27.1	75.7	27.0	64.5	26.0
45	22	148.9	34.9	115.0	32.2	107.7	31.6	87.5	30.0	84.5	29.7	70.6	28.6	69.6	28.5	59.3	27.6
45	24	135.9	35.9	104.9	33.4	98.2	32.9	79.8	31.3	77.1	31.1	64.4	30.0	63.5	30.0	54.1	29.2
50	15	227.1	34.0	175.4	30.0	164.2	29.1	133.5	26.7	128.9	26.3	107.6	24.6	106.2	24.5	90.5	23.2
50	18	207.6	35.5	160.3	31.8	150.1	31.0	122.0	28.8	117.8	28.4	98.4	26.9	97.1	26.8	82.7	25.6
50	20	194.5	36.5	150.3	33.0	140.7	32.3	114.3	30.2	110.4	29.8	92.2	28.4	91.0	28.3	77.5	27.1
50	22	181.5	37.5	140.2	34.2	131.2	33.5	106.7	31.5	103.0	31.2	86.0	29.8	84.9	29.8	72.3	28.7
50	24	168.5	38.5	130.1	35.4	121.8	34.8	99.0	32.9	95.6	32.6	79.8	31.3	78.8	31.2	67.1	30.3
55	15	259.7	36.4	200.5	31.9	187.8	31.0	152.6	28.2	147.4	27.8	123.0	25.9	121.4	25.7	103.5	24.3
55	18	240.1	38.0	185.5	33.8	173.6	32.9	141.1	30.3	136.3	29.9	113.8	28.1	112.3	28.0	95.7	26.6
55	20	227.1	39.0	175.4	35.0	164.2	34.1	133.5	31.7	128.9	31.3	107.6	29.6	106.2	29.5	90.5	28.2
55	22	214.1	40.0	165.3	36.2	154.8	35.4	125.8	33.1	121.5	32.7	101.4	31.1	100.1	31.0	85.3	29.8
55	24	201.1	41.0	155.3	37.4	145.4	36.6	118.2	34.5	114.1	34.1	95.3	32.6	94.0	32.5	80.1	31.4

Thermal output on the basis of DIN EN 1264

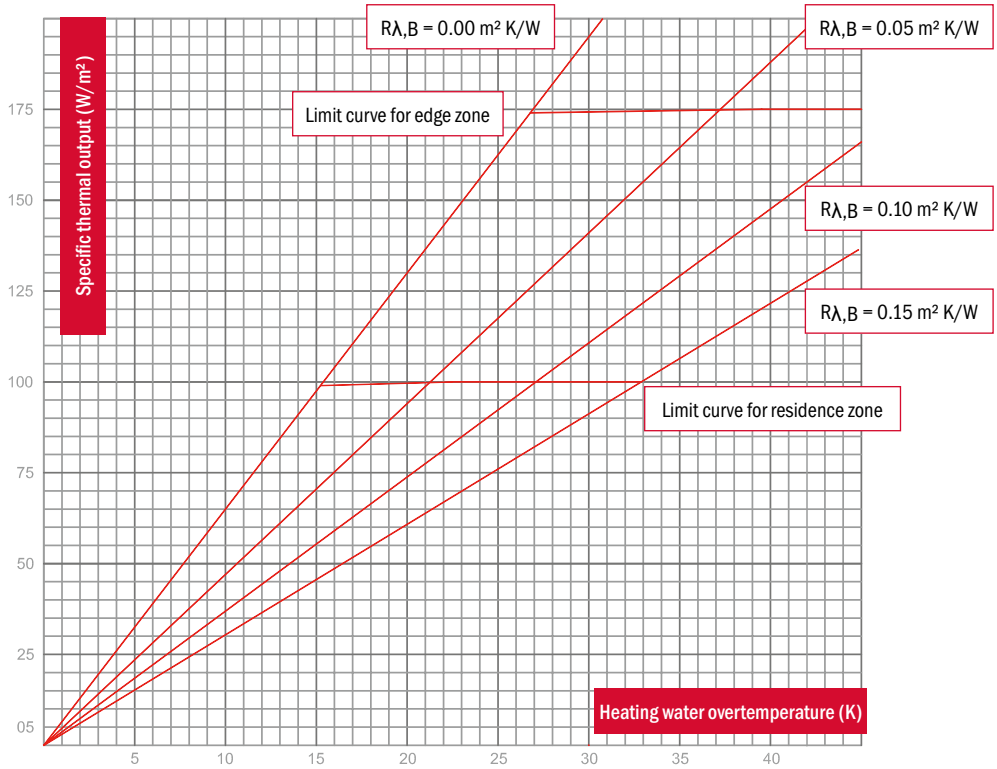
Maximum surface temperatures in accordance with DIN EN 1264
Residence zone (RZ): 29 °C | Bathrooms: 33° C | Edge zone (EZ, max. width 100 cm): 35° C

Construction: CT 01, CT 02
See product data sheets and detailed information

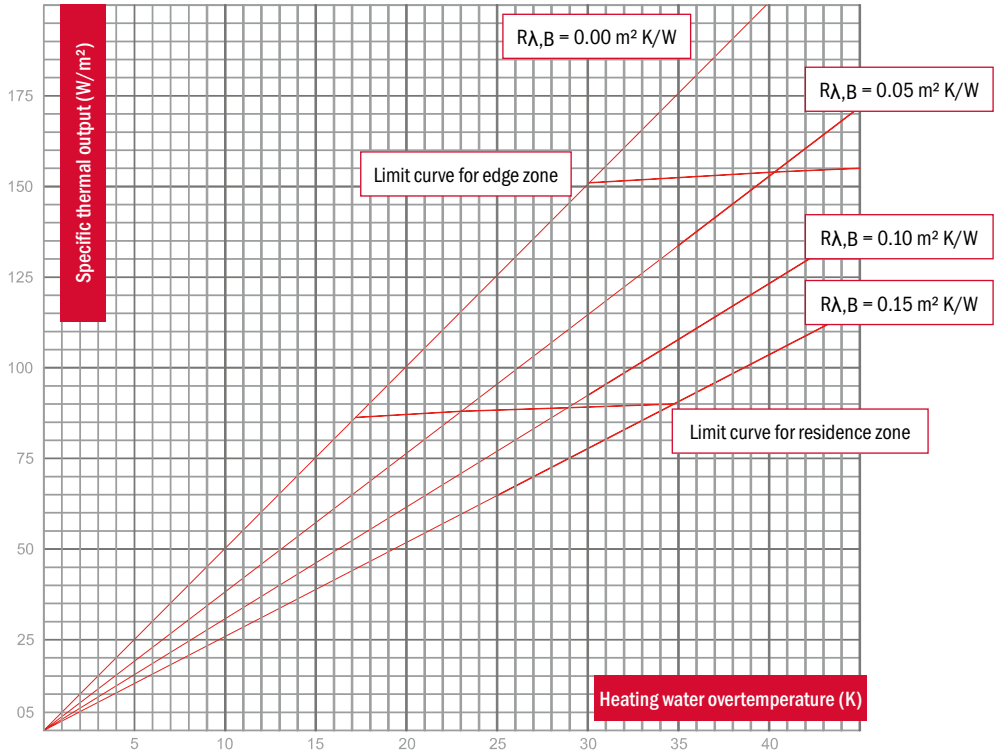
Cement screed CT

Design chart TECEfloor universal panel UP

Laying type	125 mm
Thermal conductivity λ	1.2 W/mK



Laying type	250 mm
Thermal conductivity λ	1.2 W/mK



Construction: CT 01, CT 02
See product data sheets and detailed information

CAF

Anhydrite screed CAF-F5

Thermal output TECEfloor universal panel UP

Nominal layer thickness	35 mm
Thermal conductivity λ	1.6 W/mK
spread σ	5 K

		Floor covering Rλ,B = 0.00 m² K/W **Tiles**				Floor covering Rλ,B = 0.05 m² K/W **Parquet, laminate, man-made fibres**				Floor covering Rλ,B = 0.10 m² K/W **Carpet**				Floor covering Rλ,B = 0.15 m² K/W **Velour, ready-to-lay parquet, floorboards**			
Mean heating water temperature	**Room temperature**	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature
θ_m	θ_i	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F
°C	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C
30	15	110.7	24.9	85.1	22.8	76.8	22.1	62.6	20.9	59.0	20.6	49.5	19.7	48.0	19.6	41.0	19.0
30	18	88.1	26.0	67.8	24.3	61.1	23.8	49.8	22.8	46.9	22.5	39.4	21.9	38.2	21.8	32.6	21.3
30	20	72.9	26.8	56.1	25.3	50.6	24.8	41.2	24.0	38.9	23.8	32.6	23.2	31.6	23.2	27.0	22.7
30	22	57.6	27.4	44.3	26.3	34.9	25.5	32.6	25.2	30.7	25.1	25.7	24.6	25.0	24.5	21.3	24.2
30	24	42.0	28.1	32.3	27.2	29.1	26.9	23.7	26.4	22.4	26.3	18.8	26.0	18.2	25.9	15.6	25.7
35	15	148.2	27.9	114.0	25.1	102.9	24.2	83.8	22.7	79.0	22.3	66.3	21.2	64.3	21.0	54.9	20.2
35	18	125.7	29.1	96.7	26.7	87.3	25.9	71.1	24.6	67.0	24.3	56.2	23.3	54.5	23.2	46.6	22.5
35	20	110.7	29.9	85.1	27.8	76.8	27.1	62.6	25.9	59.0	25.6	49.5	24.7	48.0	24.6	41.0	24.0
35	22	95.6	30.6	73.6	28.8	66.4	28.2	54.0	27.1	51.0	26.9	42.8	26.2	41.5	26.0	35.4	25.5
35	24	80.5	31.4	61.9	29.8	55.9	29.3	45.5	28.4	42.9	28.2	36.0	27.6	34.9	27.5	29.8	27.0
40	15	185.6	30.8	142.8	27.4	128.8	26.3	104.9	24.4	98.9	23.9	83.0	22.6	80.5	22.4	68.8	21.4
40	18	163.2	32.0	125.5	29.1	113.2	28.1	92.2	26.4	87.0	25.9	72.9	24.8	70.8	24.6	60.5	23.7
40	20	148.2	32.9	114.0	30.1	102.9	29.2	83.8	27.7	79.0	27.3	66.3	26.2	64.3	26.0	54.9	25.2
40	22	133.2	33.7	102.5	31.2	92.5	30.4	75.3	29.0	71.0	28.6	59.6	27.6	57.8	27.5	49.4	26.7
40	24	118.2	34.5	90.9	32.3	82.0	31.5	66.8	30.2	63.0	29.9	52.8	29.0	51.3	28.9	43.8	28.2
45	15	223.0	33.7	171.5	29.7	154.7	28.4	126.0	26.1	118.8	25.5	99.7	24.0	96.7	23.7	82.6	22.6
45	18	200.6	34.9	154.3	31.3	139.2	30.2	113.3	28.1	106.9	27.6	89.7	26.1	87.0	25.9	74.3	24.9
45	20	185.6	35.8	142.8	32.4	128.8	31.3	104.9	29.4	98.9	28.9	83.0	27.6	80.5	27.4	68.8	26.4
45	22	170.7	36.6	131.3	33.5	118.4	32.5	96.4	30.7	90.9	30.3	76.3	29.0	74.0	28.8	63.2	27.9
45	24	155.7	37.5	119.8	34.6	108.1	33.7	88.0	32.0	83.0	31.6	69.6	30.5	67.5	30.3	57.7	29.5
50	15	260.3	36.5	200.2	31.9	180.6	30.4	147.1	27.8	138.7	27.1	116.4	25.3	112.9	25.0	96.4	23.7
50	18	237.9	37.8	183.0	33.6	165.1	32.2	134.4	29.8	126.8	29.2	106.3	27.5	103.1	27.3	88.1	26.0
50	20	223.0	38.7	171.5	34.7	154.7	33.4	126.0	31.1	118.8	30.5	99.7	29.0	96.7	28.7	82.6	27.6
50	22	208.0	39.5	160.0	35.8	144.4	34.6	117.6	32.4	110.9	31.9	93.0	30.4	90.2	30.2	77.1	29.1
50	24	193.1	40.4	148.5	36.9	134.0	35.7	109.1	33.7	102.9	33.2	86.3	31.9	83.7	31.7	71.5	30.6
55	15	297.6	39.2	228.9	34.1	206.5	32.4	168.2	29.4	158.6	28.7	133.0	26.7	129.0	26.3	110.3	24.8
55	18	275.2	40.6	211.7	35.8	191.0	34.2	155.5	31.4	146.7	30.7	123.0	28.9	119.3	28.6	102.0	27.2
55	20	260.3	41.5	200.2	36.9	180.6	35.4	147.1	32.8	138.7	32.1	116.4	30.3	112.9	30.0	96.4	28.7
55	22	245.4	42.3	188.7	38.0	170.3	36.6	138.7	34.1	130.8	33.5	109.7	31.8	106.4	31.5	90.9	30.3
55	24	230.4	43.2	177.2	39.1	159.9	37.8	130.2	35.4	122.8	34.8	103.0	33.2	99.9	33.0	85.4	31.8

Thermal output on the basis of DIN EN 1264

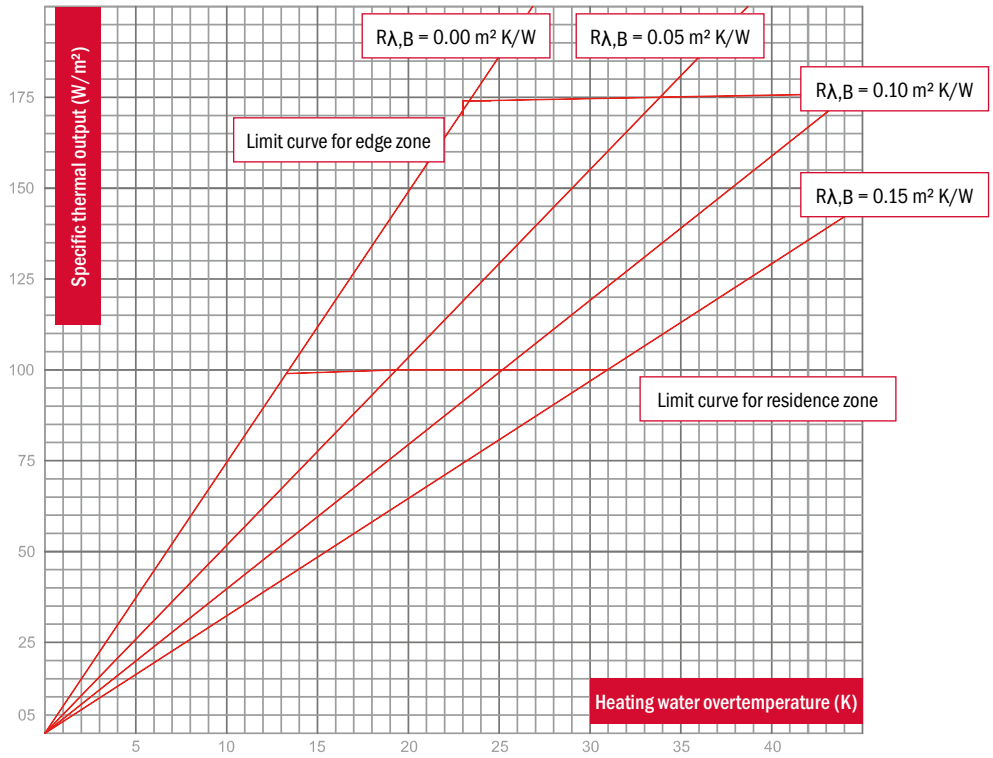
Maximum surface temperatures in accordance with DIN EN 1264
Residence zone (RZ): 29 °C | Bathrooms: 33° C | Edge zone (EZ, max. width 100 cm): 35° C

Construction: CAF 01, CAF 02, CAF 03
See production data sheets and detailed information

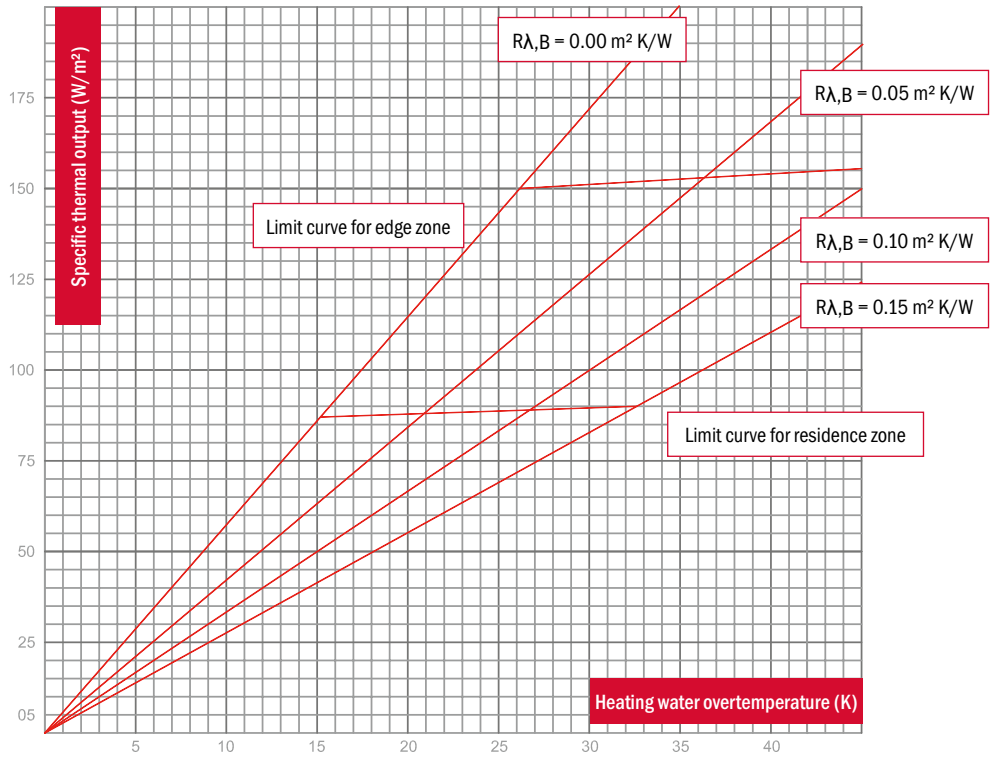
Anhydrite screed CAF-F5

Design chart TECEfloor universal panel UP

Laying type	125 mm
Thermal conductivity λ	1.6 W/mK



Laying type	250 mm
Thermal conductivity λ	1.6 W/mK



Construction: CAF 01, CAF 02, CAF 03
See production data sheets and detailed information

TE20

Dry screed element (Fermacell 20 mm)

Cooling capacity TECEfloor universal panel UP

Nominal layer thickness	20 mm
Thermal conductivity λ	0.28 W/mK

		Floor covering Rλ,B = 0.00 m² K/W **Tiles**				Floor covering Rλ,B = 0.05 m² K/W **Parquet, laminate, man-made fibres**				Floor covering Rλ,B = 0.10 m² K/W **Carpet**				Floor covering Rλ,B = 0.15 m² K/W **Velour, ready-to-lay parquet, floorboards**			
Mean cooling water temperature	**Room temperature**	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature
θ_m	θ_i	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F
°C	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C
24	28	14.8	25.7	12.0	26.2	12.2	26.1	10.1	26.4	10.3	26.4	8.7	26.7	9.0	26.6	7.7	26.8
24	27	11.1	25.3	9.0	25.6	9.1	25.6	7.6	25.8	7.7	25.8	6.5	26.0	6.7	26.0	5.8	26.1
24	26	7.4	24.9	6.0	25.1	6.1	25.1	5.0	25.2	5.2	25.2	4.4	25.3	4.5	25.3	3.8	25.4
24	25	3.7	24.4	3.0	24.5	3.0	24.5	2.5	24.6	2.6	24.6	2.2	24.7	2.2	24.7	1.9	24.7
22	29	25.8	25.0	20.9	25.8	21.3	25.7	17.6	26.3	18.1	26.2	15.3	26.7	15.7	26.6	13.4	26.9
22	28	22.1	24.6	17.9	25.2	18.2	25.2	15.1	25.7	15.5	25.6	13.1	26.0	13.4	25.9	11.5	26.2
22	27	18.5	24.2	15.0	24.7	15.2	24.7	12.6	25.1	12.9	25.0	10.9	25.3	11.2	25.3	9.6	25.5
22	26	14.8	23.7	12.0	24.2	12.2	24.1	10.1	24.4	10.3	24.4	8.7	24.7	9.0	24.6	7.7	24.8
22	24	7.4	22.9	6.0	23.1	6.1	23.1	5.0	23.2	5.2	23.2	4.4	23.3	4.5	23.3	3.8	23.4
22	22	0.0	22.0	0.0	22.0	0.0	22.0	0.0	22.0	0.0	22.0	0.0	22.0	0.0	22.0	0.0	22.0
20	28	29.5	23.5	23.9	24.3	24.3	24.3	20.2	24.9	20.6	24.8	17.4	25.3	17.9	25.2	15.4	25.6
20	27	25.8	23.0	20.9	23.8	21.3	23.7	17.6	24.3	18.1	24.2	15.3	24.7	15.7	24.6	13.4	24.9
20	26	22.1	22.6	17.9	23.2	18.2	23.2	15.1	23.7	15.5	23.6	13.1	24.0	13.4	23.9	11.5	24.2
20	24	14.8	21.7	12.0	22.2	12.2	22.1	10.1	22.4	10.3	22.4	8.7	22.7	9.0	22.6	7.7	22.8
20	22	7.4	20.9	6.0	21.1	6.1	21.1	5.0	21.2	5.2	21.2	4.4	21.3	4.5	21.3	3.8	21.4
18	28	36.9	22.3	29.9	23.4	30.4	23.3	25.2	24.1	25.8	24.0	21.8	24.6	22.4	24.6	19.2	25.0
18	27	33.2	21.9	26.9	22.9	27.4	22.8	22.7	23.5	23.2	23.4	19.6	24.0	20.2	23.9	17.3	24.3
18	26	29.5	21.5	23.9	22.3	24.3	22.3	20.2	22.9	20.6	22.8	17.4	23.3	17.9	23.2	15.4	23.6
18	24	22.1	20.6	17.9	21.2	18.2	21.2	15.1	21.7	15.5	21.6	13.1	22.0	13.4	21.9	11.5	22.2
18	22	14.8	19.7	12.0	20.2	12.2	20.1	10.1	20.4	10.3	20.4	8.7	20.7	9.0	20.6	7.7	20.8
16	28	44.3	21.2	35.9	22.5	36.5	22.4	30.2	23.3	31.0	23.2	26.2	24.0	26.9	23.9	23.0	24.5
16	27	40.6	20.8	32.9	21.9	33.4	21.9	27.7	22.7	28.4	22.6	24.0	23.3	24.6	23.2	21.1	23.8
16	26	36.9	20.3	29.9	21.4	30.4	21.3	25.2	22.1	25.8	22.0	21.8	22.6	22.4	22.6	19.2	23.0
16	24	29.5	19.5	23.9	20.3	24.3	20.3	20.2	20.9	20.6	20.8	17.4	21.3	17.9	21.2	15.4	21.6
16	22	22.1	18.6	17.9	19.2	18.2	19.2	15.1	19.7	15.5	19.6	13.1	20.0	13.4	19.9	11.5	20.2
14	28	51.7	20.1	41.9	21.6	42.6	21.5	35.3	22.6	36.1	22.4	30.5	23.3	31.4	23.2	26.9	23.9
14	27	48.0	19.6	38.9	21.0	39.5	20.9	32.8	22.0	33.5	21.8	28.3	22.6	29.1	22.5	25.0	23.2
14	26	44.3	19.2	35.9	20.5	36.5	20.4	30.2	21.3	31.0	21.2	26.2	22.0	26.9	21.9	23.0	22.5
14	24	36.9	18.3	29.9	19.4	30.4	19.3	25.2	20.1	25.8	20.0	21.8	20.6	22.4	20.6	19.2	21.0
14	22	29.5	17.5	23.9	18.3	24.3	18.3	20.2	18.9	20.6	18.8	17.4	19.3	17.9	19.2	15.4	19.6

Cooling capacity on the basis of DIN EN 1264 part 5

CAF

Anhydrite screed CAF-F5

Cooling capacity TECEfloor universal panel UP

Nominal layer thickness	35 mm
Thermal conductivity λ	1.6 W/mK

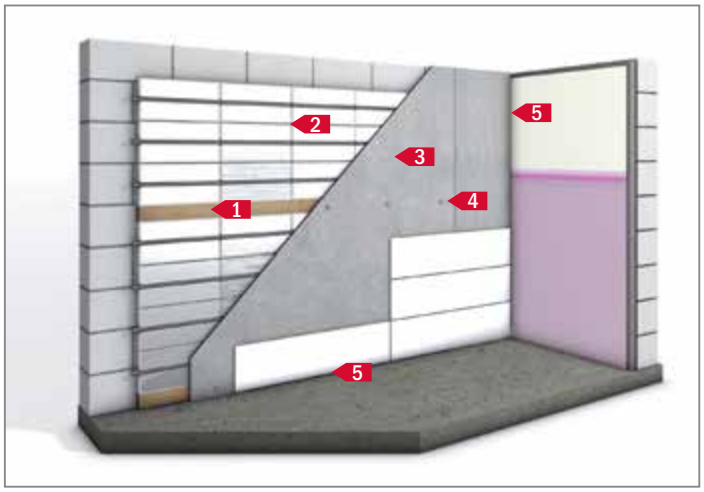
		Floor covering Rλ,B = 0.00 m² K/W **Tiles**				Floor covering Rλ,B = 0.05 m² K/W **Parquet, laminate, man-made fibres**				Floor covering Rλ,B = 0.10 m² K/W **Carpet**				Floor covering Rλ,B = 0.15 m² K/W **Velour, ready-to-lay parquet, floorboards**			
Mean cooling water temperature	**Room temperature**	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature
θ_m	θ_i	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F	EZ	θ_F	RZ	θ_F
°C	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C
24	28	19.4	25.0	15.9	25.6	15.1	25.7	12.7	26.0	12.4	26.1	10.6	26.4	10.5	26.4	9.1	26.6
24	27	14.6	24.8	11.9	25.2	11.3	25.3	9.6	25.5	9.3	25.6	8.0	25.8	7.9	25.8	6.8	25.9
24	26	9.7	24.5	8.0	24.8	7.6	24.8	6.4	25.0	6.2	25.0	5.3	25.2	5.2	25.2	4.6	25.3
24	25	4.9	24.3	4.0	24.4	3.8	24.4	3.2	24.5	3.1	24.5	2.7	24.6	2.6	24.6	2.3	24.6
22	29	34.0	23.8	27.9	24.7	26.5	24.9	22.3	25.6	21.7	25.7	18.6	26.1	18.4	26.2	15.9	26.5
22	28	29.1	23.5	23.9	24.3	22.7	24.5	19.1	25.1	18.6	25.1	15.9	25.5	15.7	25.6	13.7	25.9
22	27	24.3	23.3	19.9	23.9	18.9	24.1	15.9	24.5	15.5	24.6	13.3	25.0	13.1	25.0	11.4	25.2
22	26	19.4	23.0	15.9	23.6	15.1	23.7	12.7	24.0	12.4	24.1	10.6	24.4	10.5	24.4	9.1	24.6
22	24	9.7	22.5	8.0	22.8	7.6	22.8	6.4	23.0	6.2	23.0	5.3	23.2	5.2	23.2	4.6	23.3
22	22	0.0	22.0	0.0	22.0	0.0	22.0	0.0	22.0	0.0	22.0	0.0	22.0	0.0	22.0	0.0	22.0
20	28	38.9	22.0	31.8	23.1	30.3	23.3	25.5	24.1	24.8	24.2	21.3	24.7	21.0	24.8	18.2	25.2
20	27	34.0	21.8	27.9	22.7	26.5	22.9	22.3	23.6	21.7	23.7	18.6	24.1	18.4	24.2	15.9	24.5
20	26	29.1	21.5	23.9	22.3	22.7	22.5	19.1	23.1	18.6	23.1	15.9	23.5	15.7	23.6	13.7	23.9
20	24	19.4	21.0	15.9	21.6	15.1	21.7	12.7	22.0	12.4	22.1	10.6	22.4	10.5	22.4	9.1	22.6
20	22	9.7	20.5	8.0	20.8	7.6	20.8	6.4	21.0	6.2	21.0	5.3	21.2	5.2	21.2	4.6	21.3
18	28	48.6	20.5	39.8	21.9	37.8	22.2	31.9	23.1	31.0	23.2	26.6	23.9	26.2	24.0	22.8	24.5
18	27	43.7	20.3	35.8	21.5	34.0	21.8	28.7	22.6	27.9	22.7	23.9	23.3	23.6	23.4	20.5	23.8
18	26	38.9	20.0	31.8	21.1	30.3	21.3	25.5	22.1	24.8	22.2	21.3	22.7	21.0	22.8	18.2	23.2
18	24	29.1	19.5	23.9	20.3	22.7	20.5	19.1	21.1	18.6	21.1	15.9	21.5	15.7	21.6	13.7	21.9
18	22	19.4	19.0	15.9	19.6	15.1	19.7	12.7	20.0	12.4	20.1	10.6	20.4	10.5	20.4	9.1	20.6
16	28	58.3	19.0	47.8	20.7	45.4	21.0	38.2	22.1	37.2	22.3	31.9	23.1	31.5	23.2	27.3	23.8
16	27	53.4	18.8	43.8	20.3	41.6	20.6	35.0	21.6	34.1	21.8	29.2	22.5	28.9	22.6	25.1	23.1
16	26	48.6	18.5	39.8	19.9	37.8	20.2	31.9	21.1	31.0	21.2	26.6	21.9	26.2	22.0	22.8	22.5
16	24	38.9	18.0	31.8	19.1	30.3	19.3	25.5	20.1	24.8	20.2	21.3	20.7	21.0	20.8	18.2	21.2
16	22	29.1	17.5	23.9	18.3	22.7	18.5	19.1	19.1	18.6	19.1	15.9	19.5	15.7	19.6	13.7	19.9
14	28	68.0	17.5	55.7	19.4	53.0	19.9	44.6	21.1	43.4	21.3	37.2	22.3	36.7	22.4	31.9	23.1
14	27	63.1	17.3	51.7	19.0	49.2	19.4	41.4	20.6	40.3	20.8	34.5	21.7	34.1	21.8	29.6	22.4
14	26	58.3	17.0	47.8	18.7	45.4	19.0	38.2	20.1	37.2	20.3	31.9	21.1	31.5	21.2	27.3	21.8
14	24	48.6	16.5	39.8	17.9	37.8	18.2	31.9	19.1	31.0	19.2	26.6	19.9	26.2	20.0	22.8	20.5
14	22	38.9	16.0	31.8	17.1	30.3	17.3	25.5	18.1	24.8	18.2	21.3	18.7	21.0	18.8	18.2	19.2

Cooling capacity on the basis of DIN EN 1264 part 5

WA

Wall heating dry-wall construction

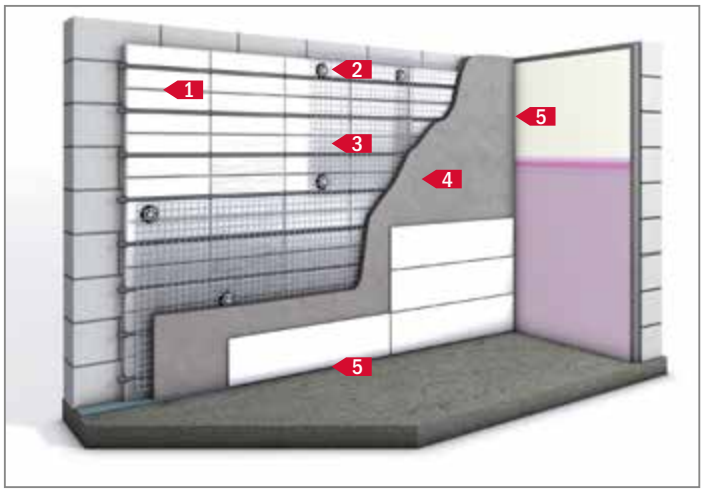
TECEfloor universal panel



1	Wooden slatting, 30 mm	
2	TECEfloor universal panel	30.0 mm
3	Plasterboard	12.5 mm
4	Dry-wall construction screws	
5	Movement joints, surrounding	
		42.5 mm

Wall heating plaster construction

TECEfloor universal panel



1	TECEfloor universal panel	30.0 mm
2	Plate anchor or plaster base anchor, 70.0 mm	
3	Plaster base/plaster reinforcement	
4	suitable heating plaster e.g.	15.0 mm
5	Edge insulation strip, surrounding	
		45.0 mm

WA

Gypsum cardboard | Gypsum plaster | Lime cement

Thermal output | Wall TECEfloor universal panel UP

		Nominal layer thickness 12.5 mm Thermal conductivity λ 0.28 W/mK spread σ 5 K				Nominal layer thickness 15 mm Thermal conductivity λ 0.58 W/mK spread σ 5 K				Nominal layer thickness 15 mm Thermal conductivity λ 0.75 W/mK spread σ 5 K			
		Covering Rλ,B = 0.0 m² K/W **Plasterboard 12.5 mm**				Covering Rλ,B = 0.0 m² K/W **Gypsum plaster 15 mm**				Covering Rλ,B = 0.0 m² K/W **Lime cement 15 mm**			
Mean heating water temperature	Room temperature	VA = 125 mm	Surface temperature	VA = 250 mm	Surface temperature	VA = 125 mm	Surface temperature	VA = 250 mm	Surface temperature	VA = 125 mm	Surface temperature	VA = 250 mm	Surface temperature
θm	θi	EZ	θF	RZ	θF	EZ	θF	RZ	θF	EZ	θF	RZ	θF
°C	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C
27.5	15	59.1	21.9	46.4	20.5	66.6	22.8	52.0	21.1	69.4	23.2	54.3	21.4
27.5	18	44.4	23.2	34.9	22.1	50.1	23.9	39.1	22.6	52.2	24.1	40.8	22.8
27.5	20	34.6	24.1	27.1	23.2	39.0	24.6	30.4	23.6	40.6	24.8	31.7	23.7
27.5	22	24.4	24.9	19.2	24.3	27.5	25.2	21.5	24.5	28.7	25.4	22.4	24.6
27.5	24	13.4	25.6	10.5	25.2	15.1	25.8	11.8	25.4	15.7	25.8	12.3	25.4
30	15	71.2	23.4	55.9	21.6	80.2	24.4	62.7	22.4	83.6	24.8	65.4	22.7
30	18	56.6	24.7	44.5	23.2	63.9	25.5	49.9	23.9	66.5	25.8	52.0	24.1
30	20	46.9	25.5	36.8	24.3	52.9	26.2	41.3	24.9	55.1	26.5	43.1	25.1
30	22	37.0	26.4	29.1	25.4	41.8	26.9	32.6	25.8	43.5	27.1	34.0	26.0
30	24	27.0	27.2	21.2	26.5	30.4	27.6	23.8	26.8	31.7	27.7	24.8	26.9
35	15	95.3	26.2	74.8	23.8	107.4	27.6	84.0	24.9	112.0	28.2	87.5	25.3
35	18	80.8	27.5	63.5	25.5	91.1	28.7	71.2	26.4	95.0	29.2	74.3	26.7
35	20	71.2	28.4	55.9	26.6	80.2	29.4	62.7	27.4	83.6	29.8	65.4	27.7
35	22	61.5	29.2	48.3	27.7	69.3	30.2	54.2	28.4	72.3	30.5	56.5	28.6
35	24	51.8	30.1	40.6	28.8	58.4	30.9	45.6	29.4	60.8	31.2	47.6	29.6
40	15	119.3	29.0	93.7	26.0	134.5	30.8	105.1	27.4	140.2	31.5	109.6	27.9
40	18	104.9	30.3	82.4	27.7	118.3	31.9	92.4	28.9	123.3	32.5	96.4	29.3
40	20	95.3	31.2	74.8	28.8	107.4	32.6	84.0	29.9	112.0	33.2	87.5	30.3
40	22	85.7	32.1	67.2	29.9	96.6	33.4	75.5	30.9	100.6	33.8	78.7	31.3
40	24	76.0	32.9	59.7	31.0	85.7	34.1	67.0	31.9	89.3	34.5	69.8	32.2
45	15	143.4	31.9	112.5	28.2	161.6	34.0	126.3	29.9	168.4	34.8	131.7	30.5
45	18	129.0	33.2	101.2	29.9	145.4	35.1	113.6	31.4	151.5	35.8	118.5	31.9
45	20	119.3	34.0	93.7	31.0	134.5	35.8	105.1	32.4	140.2	36.5	109.6	32.9
45	22	109.7	34.9	86.1	32.1	123.7	36.6	96.7	33.4	128.9	37.2	100.8	33.9
45	24	100.1	35.8	78.6	33.2	112.9	37.3	88.2	34.4	117.6	37.8	92.0	34.8
50	15	167.4	34.7	131.4	30.5	188.7	37.2	147.4	32.3	196.6	38.1	153.7	33.1
50	18	153.0	36.0	120.1	32.1	172.4	38.3	134.8	33.9	179.7	39.1	140.5	34.5
50	20	143.4	36.9	112.5	33.2	161.6	39.0	126.3	34.9	168.4	39.8	131.7	35.5
50	22	133.8	37.7	105.0	34.4	150.8	39.7	117.8	35.9	157.2	40.5	122.9	36.5
50	24	124.2	38.6	97.5	35.5	140.0	40.5	109.4	36.9	145.9	41.2	114.0	37.4

Thermal output on the basis of DIN EN 1264 – 5

Recommended maximum surface temperature
wall ≤ 40°C

See product data sheets and detailed information

TECEfloor universal panel UP

Wall heating | Wall cooling

If the flow is designed to start at the bottom, the system can be well filled on operational start-up via the rising meander.

In the event of high temperatures, such as those that can arise e.g. during complete re-heating after a very long period of non-operation, expansion noises may occur.

TECEfloor universal panel UP

Wall heating | Wall cooling

Wall statics and load bearing capacity must be sufficient for installation of wall heating. In addition, the angle and flatness tolerances must comply with DIN 18202.
Existing construction joints must be adopted when realising the wall heating.

Standards and guidelines

- DIN EN 1264
- EnEV
- VOB/C
- DIN 18202
- DIN 18350
- DIN 18550
- DIN 18180
- DIN 18181
- DIN 1168

The interfaces between structural analysis, electrical, heating, plastering and dry construction work should be clarified in the planning phase.

Material	max. flow temperature
Gypsum/lime plaster	50 °C
Loam rendering	50 °C
Lime-cement plaster	70 °C
Dry-wall construction plasterboard	50 °C
Dry-wall construction gypsum fibres (Fermacell)	55 °C

The construction physics parameters regarding U-value and dew point on outside walls, in particular, must be taken when realising the wall heating.

It is also advisable to clarify the construction plan with subsequent trades, e.g. with regard to keying surface, plaster reinforcement, movement joints and fixing points.

Depending on the material, manufacturer and contractor, different requirements may need to be met here; this must be clarified in advance.

From a physiological point of view, it is advisable to select system temperatures in such a way that a mean surface temperature of 40 °C is not exceeded. In addition, the material-dependent, permitted flow temperatures (usually max. 50 °C, lime-cement plaster max. 70 °C) must be reliably observed.

TECEfloor universal panel UP

Ceiling heating | Ceiling cooling

GK

Gypsum cardboard (Fermacell 12.5 mm)

Ceiling cooling capacity TECEfloor universal panel UP

		Covering Rλ,B = 0.00 m² K/W **Gypsum fibre 12.5 mm**				Covering Rλ,B = 0.05 m² K/W **Gypsum fibre 12.5 mm**			
Mean cooling water temperature	Room temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature	RA = 125 mm	Surface temperature	RA = 250 mm	Surface temperature
θm	θi	EZ	θF	RZ	θF	EZ	θF	RZ	θF
°C	°C	W/m²	°C	W/m²	°C	W/m²	°C	W/m²	°C
24	28	22.1	26.0	16.4	20.6	16.7	26.5	13.1	26.8
24	27	16.6	25.5	12.3	15.4	12.5	25.8	9.8	26.1
24	26	11.0	25.0	8.2	10.3	8.4	25.2	6.5	25.4
22	28	33.1	24.9	24.6	30.5	25.1	25.7	19.6	26.2
22	27	27.6	24.4	20.5	29.1	20.9	25.1	16.4	25.5
22	26	22.1	24.0	16.4	27.7	16.7	24.5	13.1	24.8
22	24	11.0	23.0	8.2	24.9	8.4	23.2	6.5	23.4
20	28	44.2	23.9	32.8	31.3	33.5	24.9	26.2	25.6
20	27	38.6	23.4	28.7	29.9	29.3	24.3	22.9	24.9
20	26	33.1	22.9	24.6	28.5	25.1	23.7	19.6	24.2
20	24	22.1	22.0	16.4	25.7	16.7	22.5	13.1	22.8
20	22	11.0	21.0	8.2	22.9	8.4	21.2	6.5	21.4
18	28	55.2	22.9	40.9	32.0	41.8	24.1	32.7	25.0
18	27	49.7	22.4	36.8	30.6	37.6	23.5	29.4	24.3
18	26	44.2	21.9	32.8	29.3	33.5	22.9	26.2	23.6
18	24	33.1	20.9	24.6	26.5	25.1	21.7	19.6	22.2
18	22	22.1	20.0	16.4	23.7	16.7	20.5	13.1	20.8
16	28	66.2	21.9	49.1	32.7	50.2	23.4	39.2	24.4
16	27	60.7	21.4	45.0	31.4	46.0	22.7	36.0	23.7
16	26	55.2	20.9	40.9	30.0	41.8	22.1	32.7	23.0
16	24	44.2	19.9	32.8	27.3	33.5	20.9	26.2	21.6
16	22	33.1	18.9	24.6	18.2	25.1	18.1	19.6	19.0
14	28	77.3	20.8	57.3	33.4	58.5	22.6	45.8	23.8
14	27	71.8	20.4	53.2	32.1	54.4	22.0	42.5	23.1
14	26	66.2	19.9	49.1	30.7	50.2	21.4	39.2	22.4
14	24	55.2	18.9	40.9	28.0	41.8	20.1	32.7	21.0
14	22	44.2	17.9	32.8	25.3	33.5	18.9	26.2	19.6

Cooling capacity on the basis of DIN EN 1264 part 5

NEW! TECEfloor manifolds for push-fitting

The new generation of TECEfloor manifolds uses the tried-and-tested TECElogo push-fitting system and is a practical alternative to manifolds with the conventional clamping ring connections:

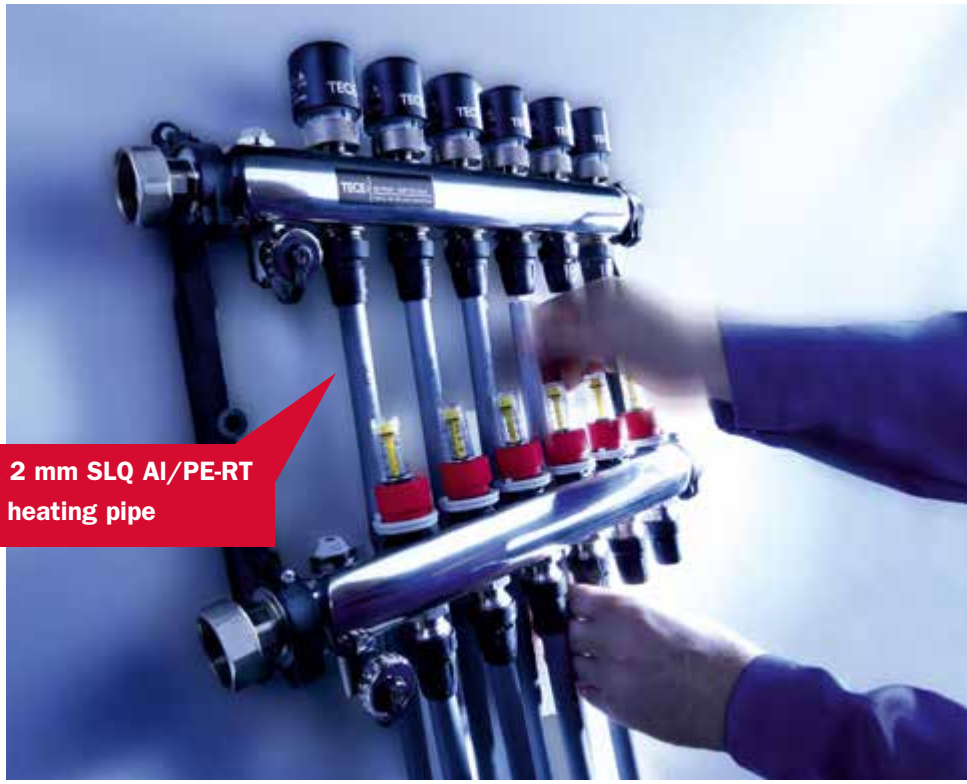
- No annoying handling with the open-jaw wrench
- No pipe distortion, twist-free fitting of the connection
- No insertion depth mistakes can be made
- With a special key, the push-fitting connection can be subsequently undone and the fitting can be used again

In addition to easy assembly through push-fitting, the manifold offers technical advantages:

- Manifold with large chamber volume
- Sound-insulated plastic retainer with quick-assembly function
  Union nut 1" flat-sealing
- Integrated return valves with double O-ring seal on valve tappet
- Valve disk with O-ring seal for the permanently reliable closing of the heating circuits
- Flow metre with shut-off 0.5 to 4 litres with locking in accordance with DIN EN 1264-4
- The viewing glass can be replaced even under system pressure
- SLQ quality-monitored and tested for compatibility – every manifold is tested for tightness and functioning

TECEfloor manifold type Logo – it couldn't be easier!

The new stainless steel manifold from TECE is designed for use with preassembled push-fittings. That makes connecting pipes significantly easier. In addition to a twist-free connection technology that also prevents the pipes from being pulled out, the new stainless steel manifold provides a large chamber volume and therefore low pressure loss in the manifold system.



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