KEW fixing technology

NEW

ThermoScrew TS U8 Gecko

Bauaufsichtlich vom DIBt Berlin zugelassen
KEW Z-21.2-2062
IFBT

ETA
CE
ETA-16/0100-ETAG 014
A - B - C - D - E

One anchor - simply universal.

> for all insulation thicknesses
> for all building materials classes A, B, C, D, E
> for all usual ETICS insulation materials
> easy to use
> a high degree of installation safety
> saving time and costs

CHI 0,000 (W/K)*
WÄRMEBRÜCKENFREI

KEW® Quality

... better products, easier life

KEW® DÜBEL

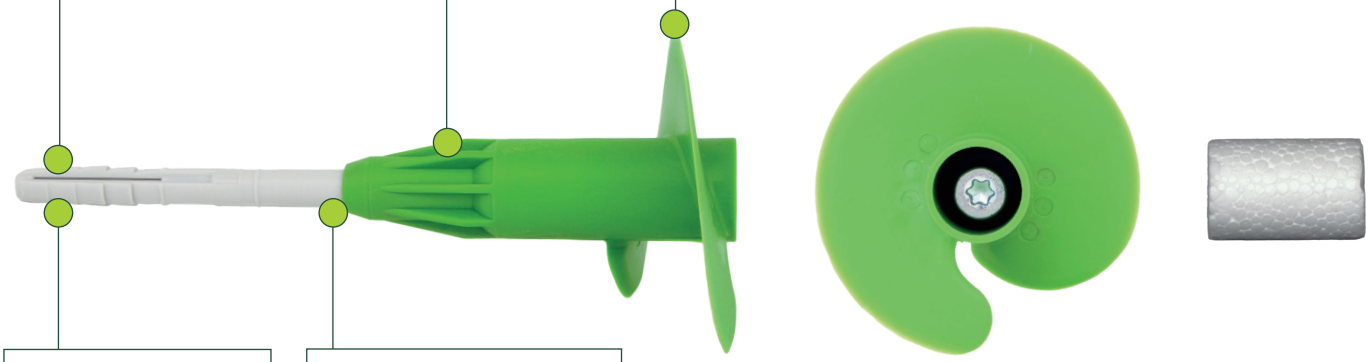
ThermoScrew TS U8 Gecko

Highlights:

safety
- the proven KEW 3-partition

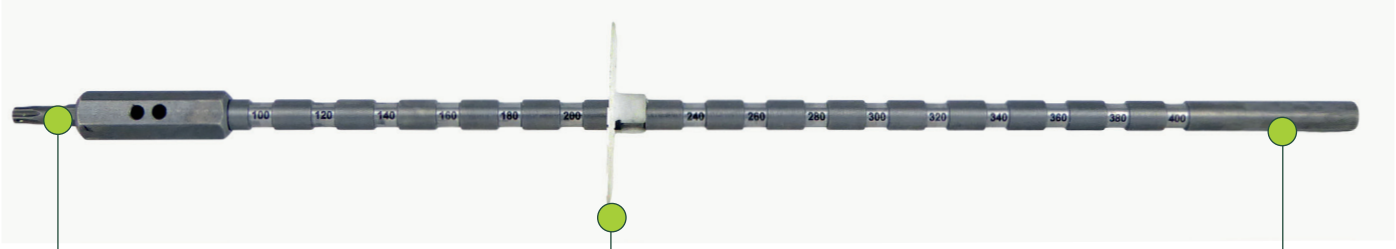
universal
- one dowel for all insulation thicknesses of 100-400 mm
- for old and new buildings

optimised
- optimised for insulation boards from EPS, XPS, PU and mineral wool



stick
- with an anchoring depth of 30 mm for the building material categories A, B, C, D, E
- with an anchoring depth of 50 mm for more perfect fastening in the lightweight concrete

secure
- more secure fastening provided by extended moisture-resistant expansion area, also in the problem buildings material



replaceable Standard Torx Bit T30 (leght 50 mm)

innovative stop clip for the marking of the optimal positioning depth

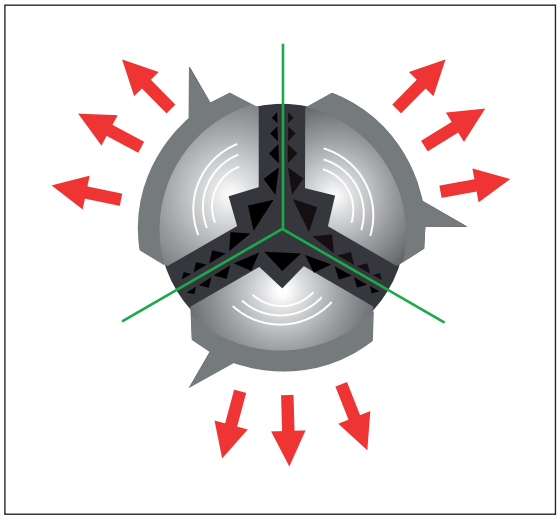
suitable for all conventional drill chuck adapters

ThermoScrew TS U8 Gecko

Advantages:

- only one dowel for all insulation thicknesses from 100 mm guarantees cost saving, optimal storage and availability
- suitable for all usual insulation boards (EPS, XPS, PU, mineral wool, phenolic resin)
- only one positioning tool from 400 mm of insulation thickness
- ETA for all building material classes A, B, C, D and E
- innovative expansion area of 30 mm provides for optimal fastening in all commercial building materials
- easy to use - due to easily comprehensible and easily manageable positioning technology
- a high degree of installation safety - no misses of the drill holes due to 2-stage positioning technology
- no dowel marks due to extra deep recess of the helix in the insulation material
- the lowest CHI value on the market for ETICS screwing dowel with metal screw - free of thermal bridges (χ = 0.000 W/ K) from 100 mm of insulation thickness *
- suitable for duplication of insulation layers - with supplementary set tolerance compensation up to 190 mm possible
- optimal screw coil construction for fast, time-saving and secure processing
- installation opening sealable with PU foam or plug

Safety provided by the anchoring zone with the proven KEW 3 partition



Proved by tests and confirmed by the millions of applications by users:
the proven 3-part anchoring zone ensures safety and ease of installation.

- high contact pressing force effect due to power distribution
- optimal central screw guidance
- high tuft retention

ThermoScrew TS U8 Gecko

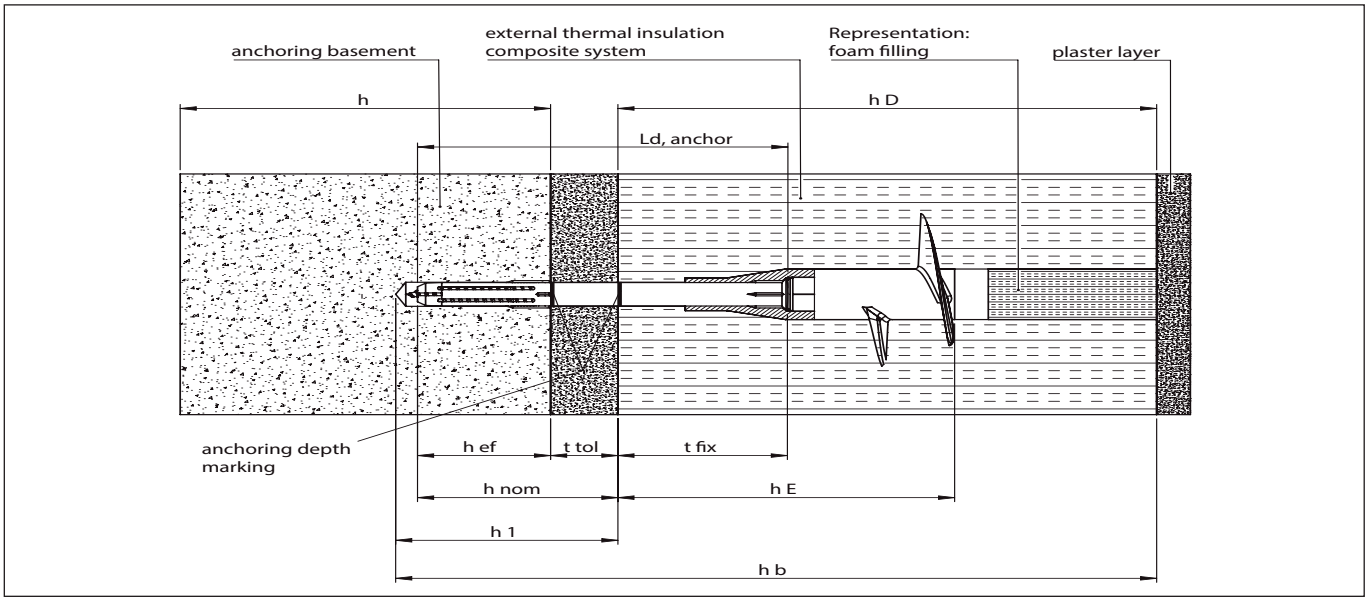
ETA

ETA-16/0100-ETAG 014
A - B - C - D - E

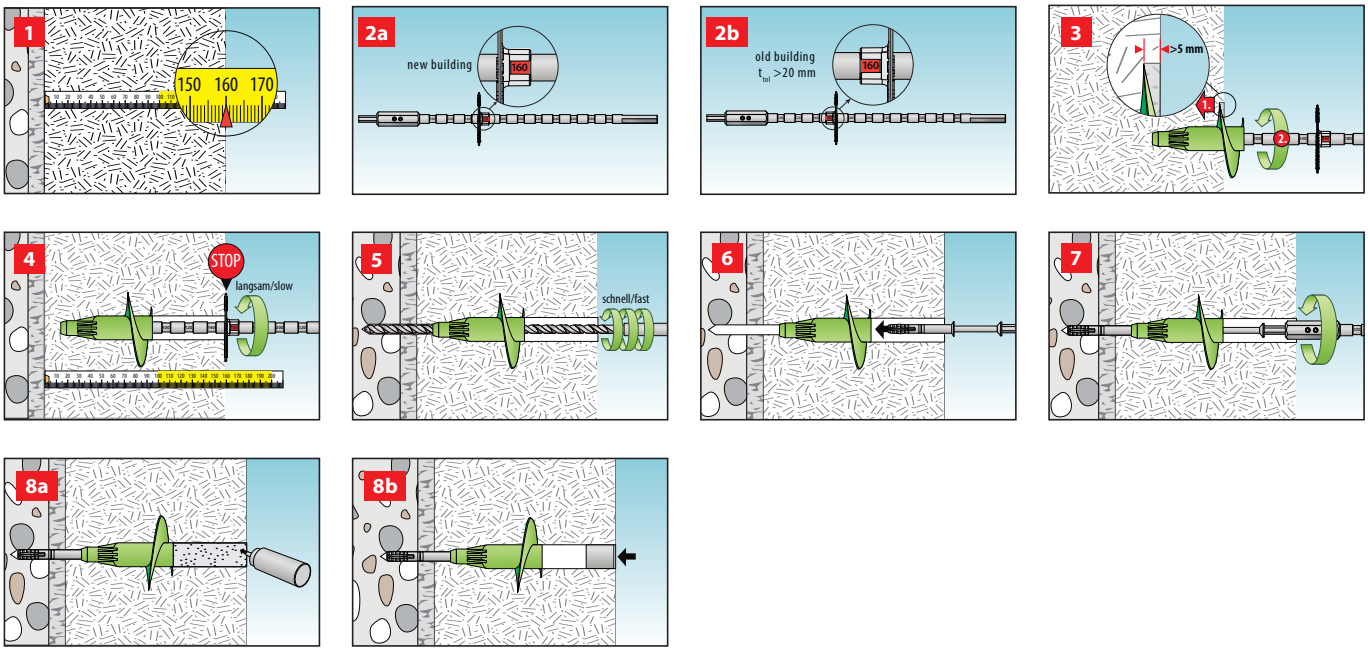
Bauaufsichtlich vom DIBt Berlin zugelassen

ETA as multiple fixing of bonded thermal insulation composite systems according to ETAG 004 for use categories A/B/C /D/E.

Facade with ETICS



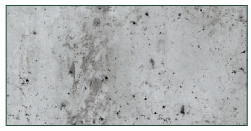
Installation

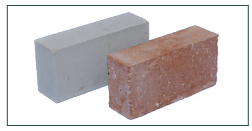


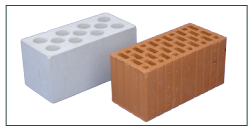
ThermoScrew TS U8 Gecko

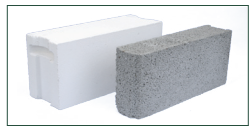
Building material suitability

	Building material groups	Name	Short name according to DIN (German Industrial Standard)	Use category according to ETAG 014
Concrete	standard concrete	standard concrete	C	A
	concrete with porous microstructure	lightweight concrete	LB	D
		reinforced porous concrete boards	Ppl / PPpl	E
Brickwork	building material with dense microstructure	solid brick	Mz	B
		clinker brick	Mz	B
		lime sand solid stone	KS	B
	perforated building material with dense microstructure	vertically perforated brick	HLz	C
		perforated lime sand stone	KSL	C
		lime sand hollow stone	KSL	C
		concrete hollow stone	Hbn	C
	solid bricks with porous microstructure	lightweight solid bricks	Vbl	B
		porous concrete	PB / PP	E
	perforated building material with porous microstructure	vertically perforated lightweight brick	HLz	C
		lightweight concrete hollow stone	Hbl	C
	natural stone with dense microstructure			C


Concrete


Solid brick

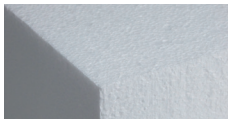
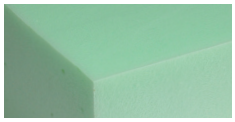

Perforated bricks


Solid bricks with porous microstructure


Perforated bricks with porous microstructure


Natural stone with dense microstructure

Insulation material suitability

	Insulation material	Design	Suitable
	expandable polystyrene (EPS)	boards	✓
	extruded rigid polystyrene foam (XPS)	boards	✓
	polyurethane boards (PU boards)	boards	✓
	mineral wool (glass)	boards	✓
	mineral wool (stone)	boards	✓

Pre-drilling in the insulation materials with higher density.

Thermal transition

Dowel type	Design	Insulation material thickness h_D [mm]	Point thermal transmission coefficient χ [W/K]
TS U8/40 gecko with foam filling	old building	≥ 100	0
	new building	100 - < 150	0,001
		≥ 150	0

* with foam filling in the old or new building from an insulation strength of min. 150 mm

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Range

Name	Product no.	Ø D Ø dowel Ø drill	LD dowel length	hD min. drilling depth	h_{ef} min. anchoring depth	h_D insulation thickness	Amount
		[mm]	[mm]	[mm]	[mm]	[mm]	St./VE
TS U8/40 Gecko	**38400**	8	100	80[1]+hD	30	100 - 400	150

[1] when t_{tol} = 40 mm

Name	Product no.	Amount pieces/VE
tubing plugs TS ST	**38402**	150
setting and screwing tool TS SW 400	**38406**	1

Technical data

During the assessing the ETA 08/0314 should be noticed.

Characteristic tensile capacity N_{Rk} [2] in [kN] per single dowel in concrete and masonry

Anchoring base	Use category according to ETAG 014	Gross density class (p) [kg/dm³]	Compression strength class (f) [N/mm²]	Drilling process	N_{Rk} [kN]
Concrete C12/15 (EN 206-1)	A			hammer drilling	1,5
Concrete C50/60 (EN 206-1)	A			hammer drilling	1,5
Lime sand solid stone, KS DIN V 106:2005-10 / EN 771-2:2011	B	≥ 1,8	12	hammer drilling	1,5
Building bricks, Mz for example according to DIN V 18152-100:2005-10 / EN 771-3:2011	B	≥ 1,7	12	hammer drilling	1,5
Lightweight concrete solid block Vbl 2 for example according to DIN V 18152-100:2005-10/EN 771-3:2011	B	≥ 0,8	2	hammer drilling	0,75
Lightweight concrete solid block Vbl 4 for example according to DIN V 18152-100:2005-10/EN 771-3:2011	B	≥ 0,8	4	hammer drilling	1,2
Vertically perforated brick HLz for example according to DIN 105-100:2012-01/EN 771-1:2011 external web thickness ≥ 12 mm	C	≥ 1,0	12	rotary drilling	0,9
Perforated lime sandstone, KS L for example according to DIN V 106:2005-10/EN 771-2:2011 external web thickness ≥ 20 mm	C	≥ 1,4	12	rotary drilling	1,5
Lightweight concrete hollow block 4K Hbl for example according to DIN V 18151-100:2005-10 / EN 771-3:2011	C	≥ 0,9	2	rotary drilling	0,75
Lightweight concrete hollow block 1K Hbl for example according to DIN V 18151-100:2005-10 / EN 771-3:2011	C	≥ 0,8	2	rotary drilling	0,9
Vertically perforated brick Hlz 250x380x235	C	≥ 1,0	6	rotary drilling	0,5
Porous lightweight concrete, LAC 4 for example according to EN 1520	D	≥ 1,0	4	hammer drilling	0,4/0,9[3]
Porous lightweight concrete, LAC 6 for example according to EN 1520	D	≥ 1,0	6	hammer drilling	0,5/1,2[3]
Porous concrete PP4-0,5 DIN V 4165-100:2005-10 for example according to EN 771-4:20111	E	≥ 0,5	4	rotary drilling	0,3/0,75[3]

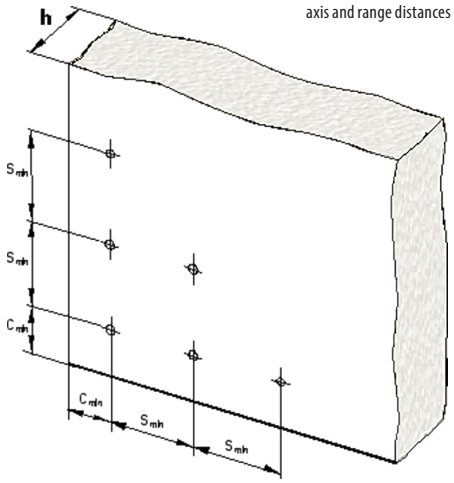
Installation measurements for concrete and brickwork

Effective anchoring depth	h_{ef} =	[mm]	30 / 50[4]
Drill hole depth	h_1[3]	[mm]	40 / 60[4]
Drill hole diameter	d_0 =	[mm]	8

Minimal distances and dimencions			
minimal thickness of building component	h =	[mm]	100
Minimal axis distance	s_{min} =	[mm]	100
Minimal range distance	c_{min} =	[mm]	100

[2] If other national regulations are not valid then the partial safety coefficient of 2.0 γ_M should be used.
[3] Is valid for effective anchoring depth of $h_{ef} \geq 50$mm - deviating from the standard of $h_{ef} \geq 30$mm.
[4] The anchoring depth, mentioned in the pos. 2 is valid only for all anchoring depths of $h_{ef} \geq 50$ mm, which are approved and enlarged in the building materials category D.

axis and range distances



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