



DECLARATION OF PERFORMANCE

Dop Nr. KEW - 1109-CPD-1010-1 - en

1. Unique identification code of the product-type: ThermoScrew TS U8 Gecko

2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4):

ETA-16/0100 Annex A3
Batch number: see packaging

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

generic type	Screwed-in plastic anchor for fixing of external thermal insulation composite systems with rendering
for use in	ETA-16/0100 Annex B1
option / category	ETA-16/0100 Annex B1
loading	ETA-16/0100 Annex B1
material	ETA-16/0100 Annex A4
temperature range	ETA-16/0100 Annex B1

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):

KEW Kunststoffzeugnisse GmbH Wilthen
Dresdener Straße 19
02681 Wilthen
Germany

5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):

--

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

7. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

--

8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment:

has been issued: **DIBt Deutsches Institut für Bautechnik**
 on the basis of: **ETA-16/0100** of **05.04.2016**
ETAG 014, Edition February 2011
 The notified body **1109-CPD** performed **System 2+**

- i) initial inspection of factory and of factory production control
- ii) continuous surveillance, assessment and approval of factory production control.

and the following is displayed: **1109-CPD-1010-1**

9. Declared performance:

Essential Characteristics	Design Method	Performance	Harmonized Technical Specification
		Steel electro-galvanized	
Characteristic resistance	ETAG 014	ETA-16/0100 Annex C1	ETAG 014
Minimum edge distance and anchor spacing	ETAG 014	ETA-16/0100 Annex B2	
Displacement behavior	ETAG 014	ETA-16/0100 Annex C2	

Where pursuant to Article 37 or 38 in the Specific Technical Documentation has been used, the requirements with which the product complies:

--

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

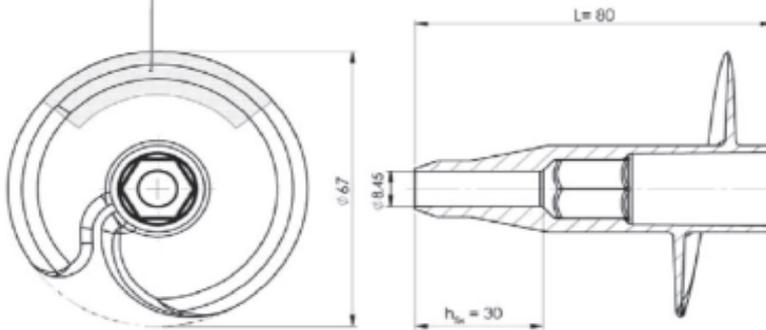
Signed for and on behalf of the manufacturer by:

André Gerjan
 (managing director sales & marketing)
Wilthen, 29.04.2016



Screw plate ThermoScrew TS U8 Gecko

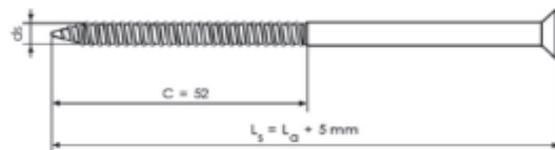
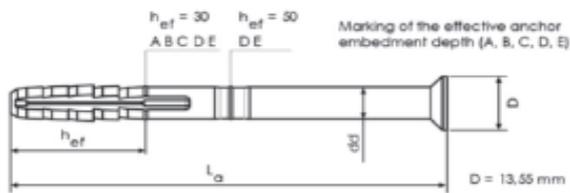
Labeling
 Manufacture: KSW
 Product name: TS U8 Gecko
 Use categories: A, B, C, D, E
 Colours: red, white, green, yellow, orange, blue, black, grey



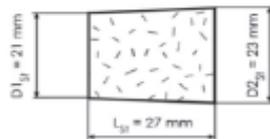
Anchor sleeve TSD WSG with special screw (ETA-08/0314)

Anchor sleeve TSD WSG

Special screw



Insulation plug



ThermoScrew TS U8 Gecko

Product description

Screw plate, anchor sleeve, special screw, insulation plug
 Marking

Annex A 3

Table A1: Dimensions

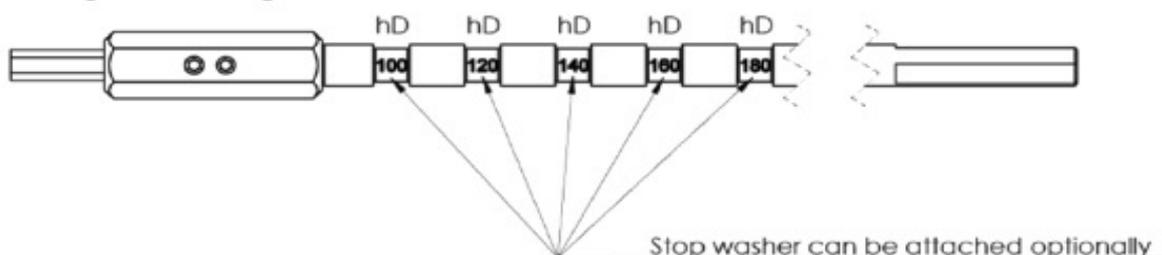
Anchor type	Anchor sleeve			Special screw		
	d_d [mm]	L_a [mm]	h_{ef} [mm]	d_s [mm]	c [mm]	L_s [mm]
TSBD WSG Use category (A-B-C-D-E)	8	100 - 250	30	5,5	52	$L_a + 5\text{mm}$
TSBD WSG Use category (D-E)	8	100 - 250	50	5,5	52	$L_a + 5\text{mm}$

Anchor type	Screw plate		
	d [mm]	L [mm]	h_{fix} [mm]
ThermoScrew TS U8 Gecko Use category (A-B-C-D-E)	67	80	30

Table A2: Materials

Element	Material
Screw plate	polyamide PA 6.6, colour: red, white, green, yellow, orange, blue, black, grey
Anchor sleeve	polypropylene PP, colour: papyrus white
Special screw	galvanized steel. A2L or A2K according to EN ISO 4042:2001
Insulation plug	polystyrene

Setting and screwing tool TS SW



Stop washer



Front



Back

ThermoScrew TS U8 Gecko

Product description

Dimensions, materials, setting tool

Annex A 4

Specifications of intended use

Anchorage subject to:

- The anchor may only be used for transmission of wind suction loads and shall not be used for the transmission of dead loads of the thermal insulation composite system.

Base materials:

- Normal weight concrete (use category A) according to Annex C 1
- Solid masonry (use category B), according to Annex C 1 and C 3
- Hollow or perforated masonry (use category C), according to Annex C 1 and C 3
- Lightweight aggregate concrete (use category D), according to Annex C 1
- Autoclaved aerated concrete (use category E), according to Annex C 1
- For other base materials of the use categories A, B, C, D or E the characteristic resistance of the anchor may be determined by job site tests according to ETAG 014 Edition February 2011, Annex D.

Temperature Range:

- 0°C to +40°C (max. short term temperature +40°C and max. long term temperature +24°C)

Design:

- The anchorages are designed in accordance with the ETAG 014 Edition February 2011 under the responsibility of an engineer experienced in anchorages and masonry work.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be anchored. The position of the anchor is indicated on the design drawings.
- Fasteners are only to be used for multiple fixings of thermal insulation composite systems.

Installation:

- Hole drilling by the drill modes according to Annex C 1.
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- Installation temperature from 0°C to +40°C
- Exposure to UV due to solar radiation of the anchor not protected by rendering ≤ 6 weeks

ThermoScrew TS U8 Gecko

**Intended use
Specifications**

Annex B 1

Table B1: Installation parameters for OLD RENDER

Anchor type		TSBD WSG
Use categories		A-B-C-D-E
Drill hole diameter	$d_0 =$ [mm]	8
Cutting diameter of drill bit	$d_{cut} \leq$ [mm]	8,45
Effective anchor embedment depth	$h_{ef} =$ [mm]	30
Thickness of equalizing layer	$t_{col} \leq$ [mm]	40 – 190
Position of screw plate	$t_{fix} \leq$ [mm]	30
Depth of drilled hole to deepest point ¹⁾	$h_1 \geq$ [mm]	80 – 230
Required length of anchor ²⁾	$L_a =$ [mm]	100 – 250
Thickness of insulation material	$h_D =$ [mm]	100 – 400
Total borehole depth	$h_b =$ [mm]	$h_D + h_1$

Table B2: Installation parameters for NEW BUILDING

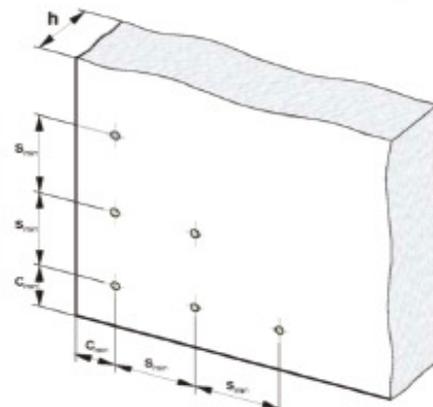
Anchor type		TSBD WSG	
Use categories		A-B-C-D-E	D-E
Drill hole diameter	$d_0 =$ [mm]	8	8
Cutting diameter of drill bit	$d_{cut} \leq$ [mm]	8,45	8,45
Effective anchorage depth	$h_{ef} =$ [mm]	30	50
Thickness of equalizing layer	$t_{col} \leq$ [mm]	20	
Position of screw plate	$t_{fix} \leq$ [mm]	50	30
Depth of drilled hole to deepest point ¹⁾	$h_1 \geq$ [mm]	60	80
Required length of anchor ²⁾	$L_a =$ [mm]	100	
Thickness of insulation material	$h_D =$ [mm]	100 – 400	
Total borehole depth	$h_b =$ [mm]	$h_D + h_1$	

¹⁾ $h_1 = h_{ef} + t_{col} + 10$ mm

²⁾ $L_a = h_{ef} + t_{col} + t_{fix}$

Table B3: Scheme of distances and spacing

		TSBD WSG
Minimum thickness of the base material	$h \geq$ [mm]	100
Minimum allowable spacing	$s_{min} =$ [mm]	100
Minimum allowable edge distance	$c_{min} =$ [mm]	100



ThermoScrew TS U8 Gecko

Intended use
Installation parameters
Distance and dimensions of the base material

Annex B 2

Table C1: Characteristic resistance to tension loads N_{Rk} in [kN] for each single anchor

Base material	Bulk density class ρ [kg/dm ³]	Minimum compressive strength f_b [N/mm ²]	Remarks	Drill method	N_{Rk} [kN]
Concrete C12/15 EN 206-1:2000				Hammer drilling	1,5
Concrete C16/20 – C50/60 EN 206-1:2000					1,5
Sand-lime solid bricks, KS e.g. acc. to DIN V 106:2005-10 / EN 771-2:2011	≥1.8	12	Vertically perforation up to 15 %		1,5
Clay bricks, Mz e.g. acc. to DIN V 105-100:2012-01 / EN 771-1:2011	≥1.7	12	Vertically perforation up to 15 %		1,5
Lightweight concrete solid blocks, Vbl 2 e.g. acc. to DIN V 18152-100:2005-10 / EN 771-3:2011	≥0.8	2	According to Annex C 3		0,75
Lightweight concrete solid blocks, Vbl 4 e.g. acc. to DIN V 18152-100:2005-10 / EN 771-3:2011	≥0.8	4	According to Annex C 3		1,2
Vertically perforated clay bricks, HLz e.g. acc. to DIN 105-100:2012-01 / EN 771-1:2011 outer web thickness ≥ 12 mm	≥1.0	12	Vertically perforation more than 15 % and less than 50 %	Rotary drilling	0,9
Vertically perforated sand-lime bricks, KSL e.g. acc. to DIN V 106:2005-10 / EN 771-2:2011 outer web thickness ≥ 20 mm	≥1.4	12	Vertically perforation more than 15 % and less than 50 %		1,5
Lightweight concrete hollow blocks, 4K Hbl e.g. acc. to DIN V 18151-100:2005-10 / EN 771-3:2011	≥0.9	2	According to Annex C 3		0,75
Lightweight concrete hollow blocks, 1K Hbl e.g. acc. to DIN V 18151-100:2005-10 / EN 771-3:2011	≥0.8	2	According to Annex C 3		0,9
Vertically perforated clay bricks Hlz 250x380x235	≥1.0	6	According to Annex C 3		0,5
Lightweight aggregate concrete, LAC 4 e.g. acc. to EN 1520:2011-06 / EN 771-3:2011	≥1.0	4	$h_{ef} \geq 30$ mm		Hammer drilling
			$h_{ef} \geq 50$ mm	0,9	
Lightweight aggregate concrete, LAC 6 e.g. acc. to EN 1520:2011-06 / EN 771-3:2011	≥1.0	6	$h_{ef} \geq 30$ mm	0,5	
			$h_{ef} \geq 50$ mm	1,2	
Autoclaved aerated concrete, PP4-05 e.g. acc. to DIN V 4165-100:2005-10 / EN 771-4:2011	≥0.5	4	$h_{ef} \geq 30$ mm	Rotary drilling	0,3
			$h_{ef} \geq 50$ mm		0,75

ThermoScrew TS U8 Gecko

Performances
Characteristic resistance of the anchor

Annex C 1

Table C2: Displacements

Base material	Bulk density class ρ [kg/dm ³]	Minimum compressive strength f_b [N/mm ²]	Tension load N [kN]	Displacements $\delta_m(N)$ [mm]
Concrete C12/15-C50/60 EN 206-1:2000			0,50	1,6
Sand-lime solid bricks, KS DIN V 106:2005-10 / EN 771-2:2011	≥1.8	12	0,50	1,7
Clay bricks, Mz DIN 105-100:2012-01 / EN 771-1:2011	≥1.7	12	0,50	1,7
Lightweight concrete blocks, Vbl 2 DIN V 18152-100:2005-10 / EN 771-3:2011	≥0.8	2	0,25	1,0
Lightweight concrete block, Vbl 4 DIN V 18152-100:2005-10 / EN 771-3:2011	≥0.8	4	0,40	1,5
Vertically perforated clay brick, HLz DIN 105-100:2012-01 / EN 771-1:2011	≥1.0	12	0,30	1,0
Vertically perforated sand-lime bricks, KSL DIN V 106:2005-10 / EN 771-2:2011	≥1.4	12	0,50	1,7
Lightweight concrete hollow block, 4K Hbl DIN V 18151-100:2005-10 / EN 771-3:2011	≥0.9	2	0,25	0,8
Lightweight concrete hollow block, 1K Hbl DIN V 18151-100:2005-10 / EN 771-3:2011	≥0.8	2	0,30	1,1
Vertically perforated clay bricks Hlz 250x380x235	≥1.0	6	0,15	0,6
Lightweight aggregate concrete, LAC 4 EN 1520:2011-06 / EN 771-3:2011	≥1.0	4	$h_{ef} > 30$ mm: 0,15	0,5
			$h_{ef} \geq 50$ mm: 0,30	1,1
Lightweight aggregate concrete, LAC 6 EN 1520:2011-06 / EN 771-3:2011	≥1.0	6	$h_{ef} > 30$ mm: 0,15	0,5
			$h_{ef} \geq 50$ mm: 0,40	1,3
Autoclaved aerated concrete, PP4-05 DIN V 4165-100:2005-10 / EN 771-4:2011	≥0.5	4	$h_{ef} > 30$ mm: 0,10	0,5
			$h_{ef} \geq 50$ mm: 0,25	0,7

ThermoScrew TS U8 Gecko

Performances
Displacements

Annex C 2