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European Technical Assessment Body  
for construction products



## European Technical Assessment

ETA-04/0030  
of 16 December 2025

English translation prepared by DIBt - Original version in German language

### General Part

Technical Assessment Body issuing the European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

Insulation support KEW TSD 8

Product family  
to which the construction product belongs

Plastic anchor for fixing of external thermal insulation  
composite systems with rendering

Manufacturer

Kunststoffzeugnisse GmbH Wilthen  
Dresdener Straße 19  
02681 Wilthen  
GERMANY

Manufacturing plant

Kunststoffzeugnisse GmbH Wilthen  
Dresdener Straße 19  
02681 Wilthen

This European Technical Assessment  
contains

13 pages including 3 annexes which form an integral part  
of this assessment

This European Technical Assessment is  
issued in accordance with Regulation (EU)  
No 305/2011, on the basis of

EAD 330196-01-0604

This version replaces

ETA-04/0030 issued on 11 September 2014

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## Specific Part

### 1 Technical description of the product

The insulation support KEW TSD 8 is a nailed-in anchor which consists of a plastic part made of polypropylene (virgin material) and an accompanying specific nail of galvanized steel or of stainless steel. The head of the nail has an additional plastic coating.

The Insulation support KEW TSD 8 may in addition be combined with the anchor plates DSB 90, DSB 110 and DSB 140.

The product description is given in Annex A.

### 2 Specification of the intended use in accordance with the applicable European Assessment Document

The performances given in Section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the anchor of at least 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

### 3 Performance of the product and references to the methods used for its assessment

#### 3.1 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Characteristic load bearing capacity <ul style="list-style-type: none"><li>- Characteristic resistance under tension load</li><li>- Minimum edge distance and spacing</li></ul>	See Annex C 1 See Annex B 2
Displacements	See Annex C 2
Plate stiffness	See Annex C 2

#### 3.2 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Point thermal transmittance	See Annex C 2

### 4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with EAD No. 330196-01-0604, the applicable European legal act is: [97/463/EC].

The system to be applied is: 2+

**5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable European Assessment Document**

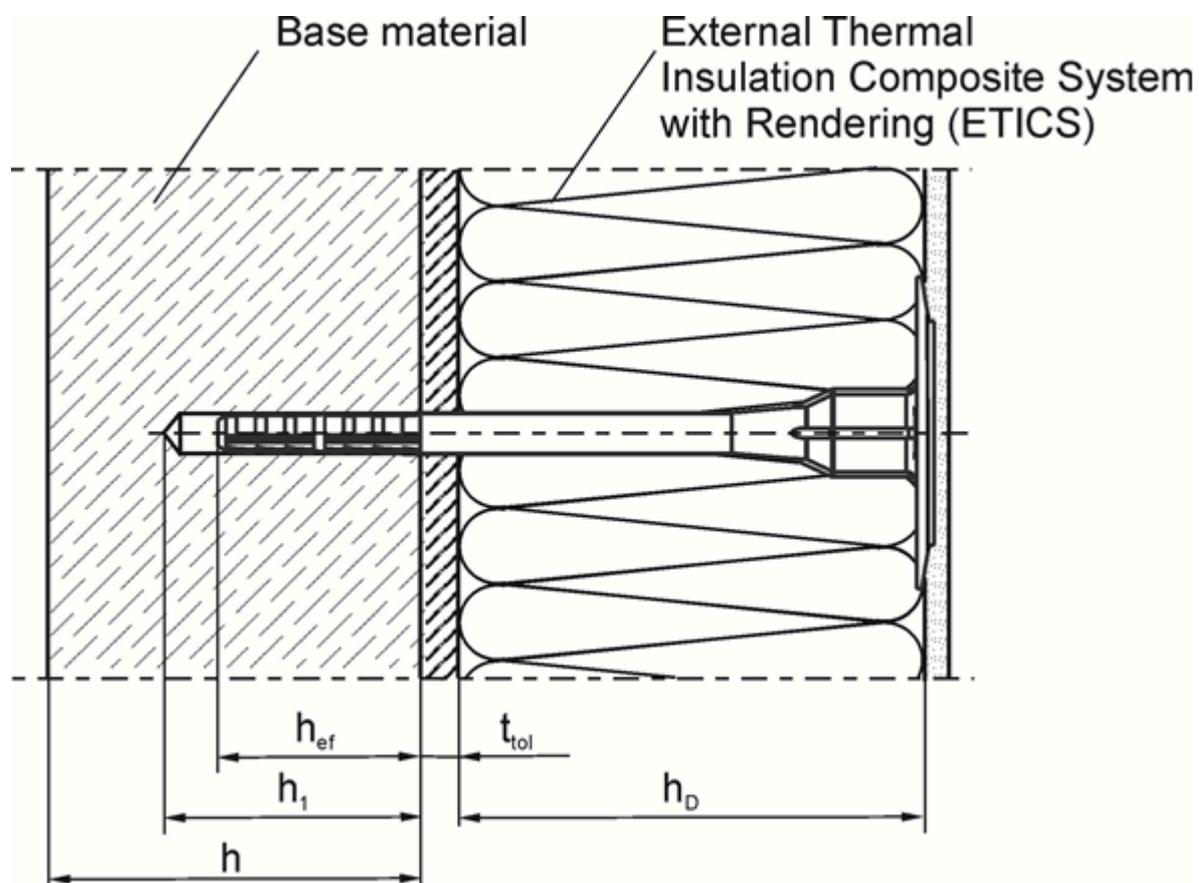
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 16 December 2025 by Deutsches Institut für Bautechnik

Dipl.-Ing. Beatrix Wittstock  
Head of Section

*beglaubigt:*  
Ziegler

### KEW TSD



### Legend

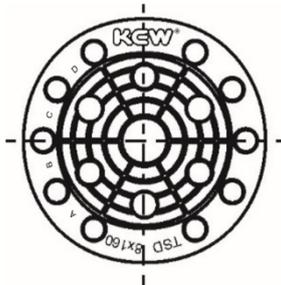
- $h_D$  = thickness of insulation material
- $h_{ef}$  = effective anchorage depth
- $h$  = thickness of member (wall)
- $h_1$  = depth of drill hole to deepest point
- $t_{tol}$  = thickness of equalizing layer or non-load-bearing coating

Insulation support KEW TSD 8

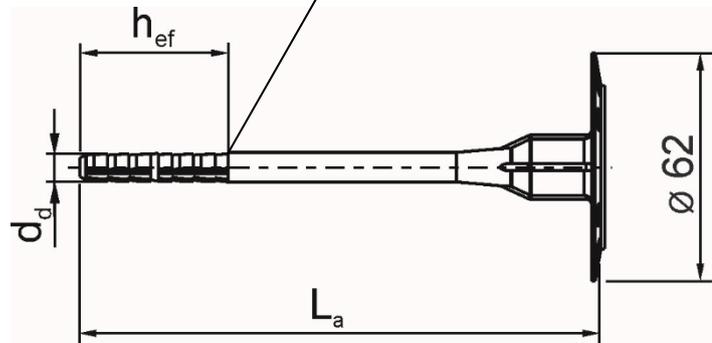
Product description  
Installed condition

Annex A 1

**KEW TSD**

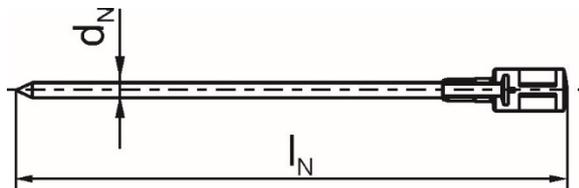


marking of effective anchorage depth



**Marking of the anchor sleeve:**  
 Symbol of manufacturing plant – (KEW®)  
 Anchor type – (TSD)  
 diameter – (ø8)  
 Length of the anchor (z.B. 160)  
 Base material group A, B, C, D

**Special nail with special head**



**Table A1: Dimensions**

Anchor Type	Anchor sleeve				Specific screw	
	L <sub>a</sub> min [mm]	L <sub>a</sub> max [mm]	d <sub>d</sub> [mm]	h <sub>ef</sub> [mm]	d <sub>N</sub> [mm]	l <sub>N</sub> [mm]
<b>KEW TSD</b> Base material group (A-B-C-D)	<b>80</b>	<b>300</b>	<b>8</b>	<b>40</b>	<b>4,2</b>	<b>L<sub>a</sub> + 4mm</b>
Determination of maximum thickness of insulation [mm]: <b>h<sub>D</sub> = L<sub>a</sub> - h<sub>ef</sub> - t<sub>tol</sub></b>						
e.g.:	<b>L<sub>a</sub> = 160</b>		<b>h<sub>ef</sub> = 40</b>		<b>t<sub>tol</sub> = 0</b>	
TSD 8x160	thickness of insulation material <b>h<sub>D max</sub> = 120</b>					

**Insulation support KEW TSD 8**

**Product description**  
 Marking and dimension of the anchor sleeve and expansion element

**Annex A 2**

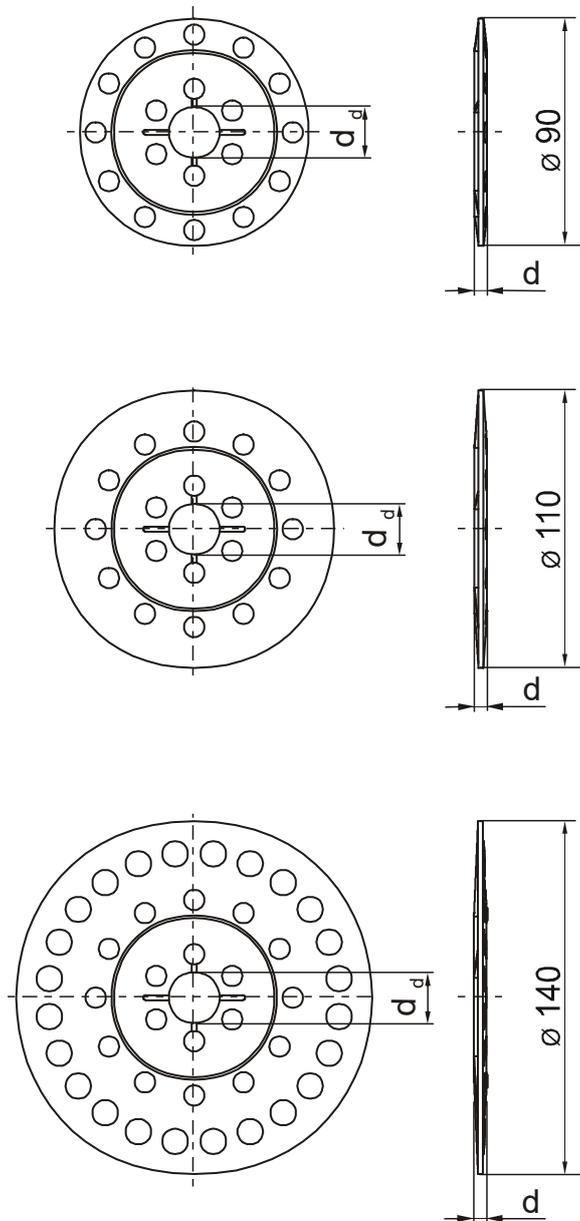
**Table A2: Materials**

Name	Materials
Anchor sleeve + Anchor plate	Virgin Polypropylen (colour: anthracite / grey)
Specific nail	Steel, electro galvanized $\geq 5 \mu\text{m}$ according to EN ISO 4042:2022, or non-electrolytically applied zinc flake coatings $\geq 5 \mu\text{m}$ in accordance with EN ISO 10683:2018 or stainless steel grade 1.4401, 1.4404 in accordance with EN 10088-3:2014

**Insulation support KEW TSD 8**

**Product description**  
Materials

**Annex A 3**



**Table A3: Additional plates, diameter and materials**

Insulation discs	Ø D [mm]	Ø d <sub>d</sub> [mm]	d [mm]	Werkstoff
<b>DSB 90</b>	90	20	5	Virgin polyamide PA 6 + GF or virgin polypropylene PP
<b>DSB 110</b>	110	20	5	
<b>DSB 140</b>	140	20	5	

Insulation support KEW TSD 8

Product description  
Slip on plates

**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:

- Compacted normal weight concrete without fibres (base material group A) according to Annex C 1
- Solid masonry (base material group B), according to Annex C 1
- Hollow or perforated masonry (base material group C), according to Annex C 1
- Lightweight aggregate concrete (base material group D), according to Annex C 1
- For other base materials of the base material groups A, B, C, D or E the characteristic resistance of the anchor may be determined by job site tests according to EOTA Technical Report TR 051 edition April 2018.

#### 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 under the responsibility of an engineer experienced in anchorages and masonry work with the partial safety factors  $\gamma_M = 2,0$  and  $\gamma_F = 1,5$ , if there are no other national regulations.
- 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 C1.
- 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  $\leq 6$  weeks

Insulation support KEW TSD 8

Intended use  
Specifications

Annex B 1

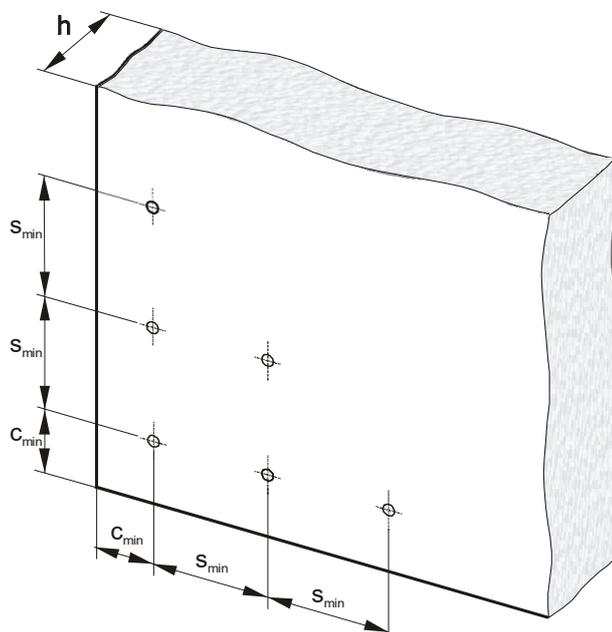
**Table B1: Installation parameters**

Anchor type		KEW TSD
Drill hole diameter	$d_0 =$ [mm]	8
Cutting diameter of drill bit	$d_{cut} \leq$ [mm]	8,45
Depth of drill hole to deepest point	$h_1 \geq$ [mm]	50
Effective anchorage depth	$h_{ef} \geq$ [mm]	40

**Table B2: Anchor distances and dimensions of members**

Anchor type		KEW TSD
Minimum spacing	$s_{min} =$ [mm]	100
Minimum edge distance	$c_{min} =$ [mm]	100
Thickness of member	$h =$ [mm]	100

Scheme of distance and spacing

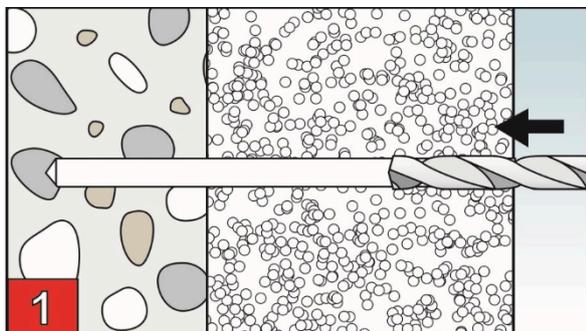


**Insulation support KEW TSD 8**

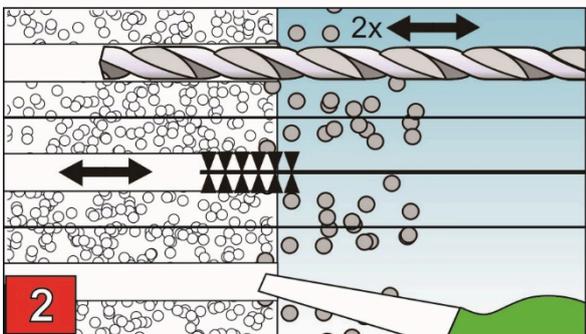
**Intended use**  
Installation parameters,  
Minimum thickness of member, edge distances and spacing

**Annex B 2**

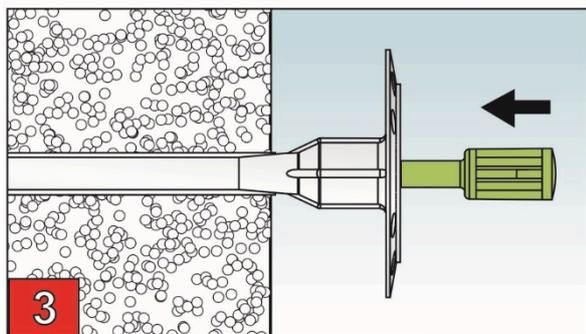
### Installation instructions



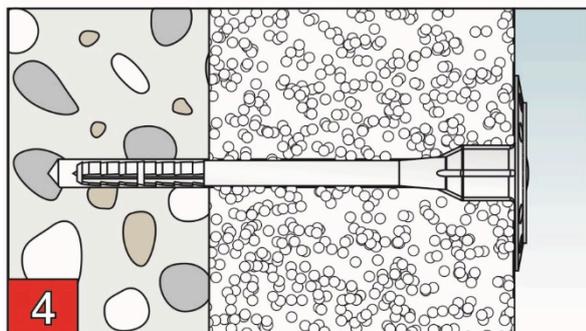
Create a hole about observation of the drill method according Annex C 1



Holes to be cleaned of drilling dust using one of the methods shown



Insert the anchor into the hole until the plate rests on the insulation. hammer in the Nail with a matching hammer



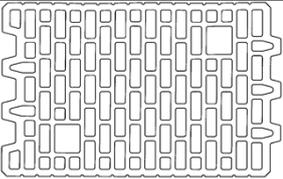
Mounted

Insulation support KEW TSD 8

Intended use  
Installation instructions

Annex B 3

**Table C1: Characteristic resistance to tension loads  $N_{Rk}$  [kN] in concrete and masonry for single anchor**

Anchor type					KEW TSD
Base material	Bulk density $\rho$ [kg/dm <sup>3</sup> ]	Minimum compressive strength $f_b$ [N/mm <sup>2</sup> ]	General remarks	Drilling method <sup>1)</sup>	$N_{Rk}$ [kN]
Concrete C12/15 as per EN 206:2013+A1:2016			Compacted normal weight concrete without fibres	H	0,5
Concrete C16/20 – C50/60 as per EN 206:2013+A1:2016			Compacted normal weight concrete without fibres	H	0,75
Clay brick, Mz as per EN 771-1:2011+A1:2015	≥ 1,8	20	Vertically perforation <sup>2)</sup> up to 15%	H	0,6
Sand-lime solid bricks (calcium silikate), KS as per EN 771-2:2011+A1:2015	≥ 1,8	12	Vertically perforation <sup>2)</sup> up to 15%	H	0,8
Prefabricated reinforced components of lightweight aggregate concrete with open structure as per EN 1520:2011	≥ 0,9	4		H	0,4
Lightweight concrete solid block, Vbl as per EN 771-3:2011+A1:2015	≥ 0,9	4	Proportion of handle hole to resting area up to 10%, maximum size of handle hole: length = 110 mm width = 45 mm	H	0,4
Vertically perforated sand-lime-bricks KS L, as per EN 771-2:2011+A1:2015	≥ 1,4	12	Vertically perforation <sup>2)</sup> > 15 % and ≤ 50 % outer web thickness ≥ 22 mm <sup>3)</sup>	D	0,4
Perforated clay bricks, HLz as per EN 771-1:2011+A1:2015	≥ 1,0	12	Vertically perforation <sup>2)</sup> > 15 % and ≤ 50 % outer web thickness ≥ 11 mm <sup>3)</sup>	D	0,4
Perforated clay bricks, HLz 250mm x 380mm x 235mm	≥ 0,8	6	 outer web thickness ≥ 16 mm <sup>3)</sup>	D	0,3

<sup>1)</sup> H = hammer drill, D = rotary drill

<sup>2)</sup> Cross section reduced by perforation vertically to the resting area

<sup>3)</sup> The value for  $N_{Rk}$  applies only for the given minimum outer web thickness, otherwise the characteristic resistance shall be determined by job site pull-out tests.

**Insulation support KEW TSD 8**

**Performances**  
Characteristic tension resistance

**Annex C 1**

**Table C2: Point thermal transmittance according EOTA Technical Report TR 025:2016-05**

anchor type	insulation thickness $h_D$ [mm]	point thermal transmittance $\chi$ [W/K]
<b>KEW TSD</b> with specific nail, galvanized steel	40 – 260	0,002
<b>KEW TSD</b> with specific nail, stainless steel	40 – 150	0,002
	150 - 260	0,001

**Table C3: Plate stiffness according EOTA Technical Report TR 026:2016-05**

anchor type	diameter of the anchor plate [mm]	load resistance of the anchor plate [kN]	plate stiffness [kN/mm]
<b>KEW TSD</b>	60	1,6	0,6

**Table C4: Displacements**

Base materials	Bulk density $\rho$ [kg/dm <sup>3</sup> ]	Minimum compressive strength $f_b$ [N/mm <sup>2</sup> ]	Tension load N [kN]	Displacements $\Delta \delta_N$ [mm]
Concrete C12/15 as per EN 206:2013+A1:2016			0,16	0,3
Concrete C16/20 – C50/60 as per EN 206:2013+A1:2016			0,25	0,3
Clay brick, Mz as per EN 771-1:2011+A1:2015	≥ 1,8	20	0,20	0,2
Sand-lime solid bricks (calcium silikate), KS as per EN 771-2:2011+A1:2015	≥ 1,8	12	0,25	0,5
Prefabricated reinforced components of lightweight aggregate concrete with open structure as per EN 1520:2011	≥ 0,9	4	0,13	0,4
Lightweight concrete solid block, Vbl as per EN 771-3:2011+A1:2015	≥ 0,9	4	0,13	0,4
Vertically perforated sand-lime-bricks KS L, as per EN 771-2:2011+A1:2015	≥ 1,4	12	0,13	0,13
Perforated clay bricks, HLZ as per EN 771-1:2011+A1:2015	≥ 1,0	12	0,13	0,11
Perforated clay bricks, HLZ 250mm x 380mm x 235mm	≥ 0,8	6	0,10	0,06

**Insulation support KEW TSD 8**

**Performances**

Point thermal transmittance, plate stiffness, displacements

**Annex C 2**