



TELJESÍTMÉNY-NYILATKOZAT

DoP Nr. KEW - 2323-CPR-0033 - hu

1. A termék egyértelmű neve, kódja: Termodübel acél csavarral TSBD / TSB DL / TSBD WS
2. Típus-, gyártási -, szériaszám, vagy más jelölés a termék egyértelmű azonosítására a 11. cikk 4. bekezdése szerint:
ETA-09/0184 melléklet A4
Gyártási szám: lásd csomagolás
3. Az építési termék gyártó által megadott felhasználása(i) a műszaki specifikáció alapján

Terméktípus	Műanyagdübel acél csavarral vakolt külső hőszigetelő rendszerek rögzítésére.
A felhasználás helye	ETA-08/0314 melléklet B1
Felhasználási kategória	ETA-08/0314 melléklet B1
Terhelés	ETA-08/0314 melléklet B1
Anyaga	ETA-08/0314 melléklet A6
Hőmérséklet-tartomány	ETA-08/0314 melléklet B1

4. A gyártó neve, bejegyzett kereskedelmi neve és címe a 11. cikk 5. bekezdése alapján:
KEW Kunststoffzeugnisse GmbH Wilthen
Dresdener Straße 19
02681 Wilthen
Germany
5. Az esetleges meghatalmazott neve a 12. cikk 2. bekezdése alapján:
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6. Az építési termék teljesítményének vizsgálatára és értékelésére alkalmazott rendszer(ek) a V melléklet szerint:
Rendszer 2+
7. A teljesítmény-nyilatkozathoz használt harmonizált szabvány:
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8.

A teljesítmény-nyilatkozat alapjául szolgáló tanúsítvány kibocsájtója:

DIBt Deutsches Institut für Bautechnik

Tanúsítvány:

ETA-08/0314

-től

15.04.2015

A vizsgálati eljárás alapja:

ETAG 014 változat 2011

A tanúsítványt kiadó szerv

2323-CPR

a

Rendszer 2+

szerint feladatként határozta meg:

- i) A gyártó üzem és az üzemi gyártásellenőrzés megismerése;
- ii) Folyamatos ellenőrzés, az üzemi gyártásellenőrzés véleményezése, minősítése.

és az alábbi adta ki:

2323-CPR-0033

9. Tanúsított teljesítmény:

Fontos ismertetőjegyek	Mérési módszer	Teljesítmény		Harmonizált műszaki specifikáció
		Acél, horganyozó	Rozsdamentes acél A4	
Jellemző kihúzó értékek	ETAG 014 mint EAD	ETA-08/0314 melléklet C1	ETA-08/0314 melléklet C1	ETAG 014 mint EAD
Minimális tengely- és peremtávolságok	ETAG 014 mint EAD	ETA-08/0314 melléklet B2	ETA-08/0314 melléklet B2	
Elmozdulás a használat során	ETAG 014 mint EAD	ETA-08/0314 melléklet C4	ETA-08/0314 melléklet C4	
Hőátteresztési koefficiens	ETAG 014 mint EAD	ETA-08/0314 melléklet C2/C3	ETA-08/0314 melléklet C2/C3	
Tányérmerevség	ETAG 014 mint EAD	ETA-08/0314 melléklet C4	ETA-08/0314 melléklet C4	

Ha a 37. vagy 38. cikk szerint a vizsgálathoz különleges műszaki specifikációt használtak, követelmények, amelyeknek a termék megfelel:

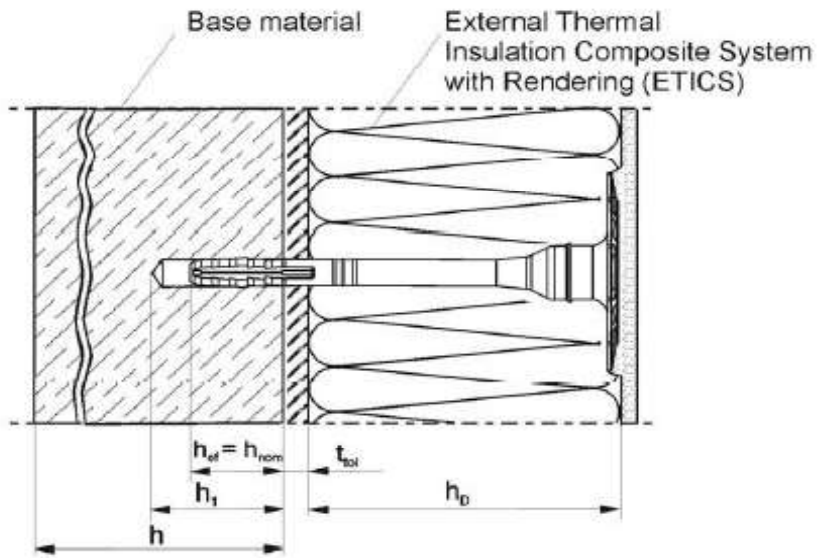
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10. A termék teljesítménye az 1. és 2. pont szerint megfelel a 9. pontban leírtaknak. Ezen a teljesítmény-nyilatkozat kiadásáért egyedül a 4. pontban megadott gyártó felelős. A gyártó nevében aláírja:

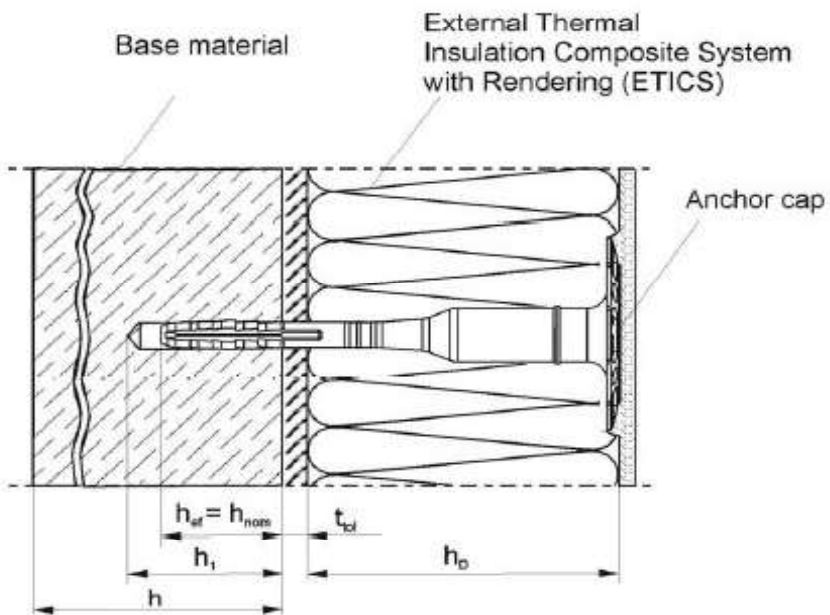

André Gedán
(Kereskedelmi - és marketing igazgató)
Wilthen, 13.06.2019



TSBD



TSBDL



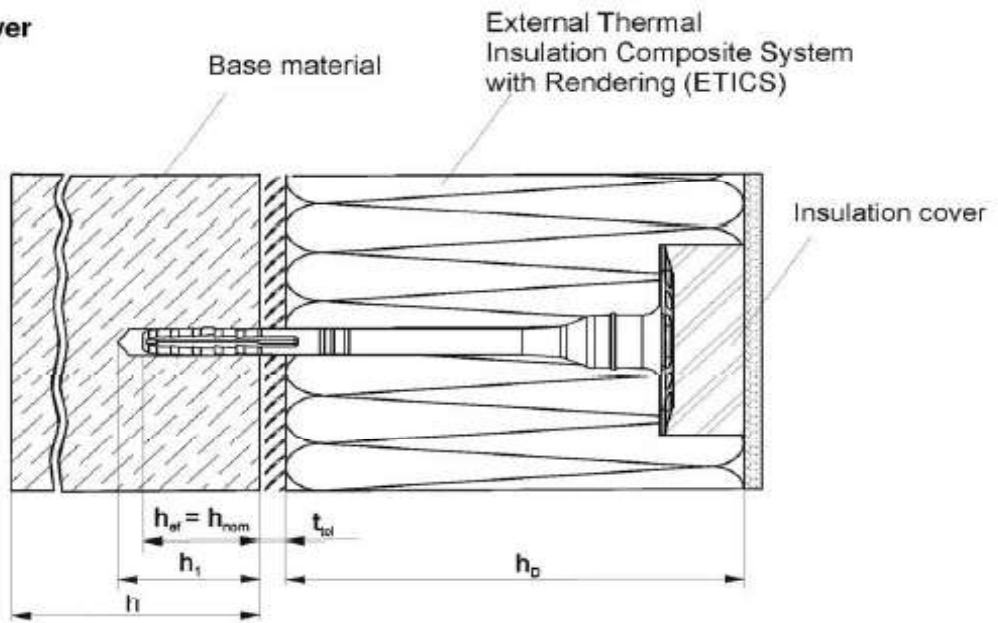
Insulation support -TSBD - TSBDL - TSBD WS - TSBD WSG

Product description

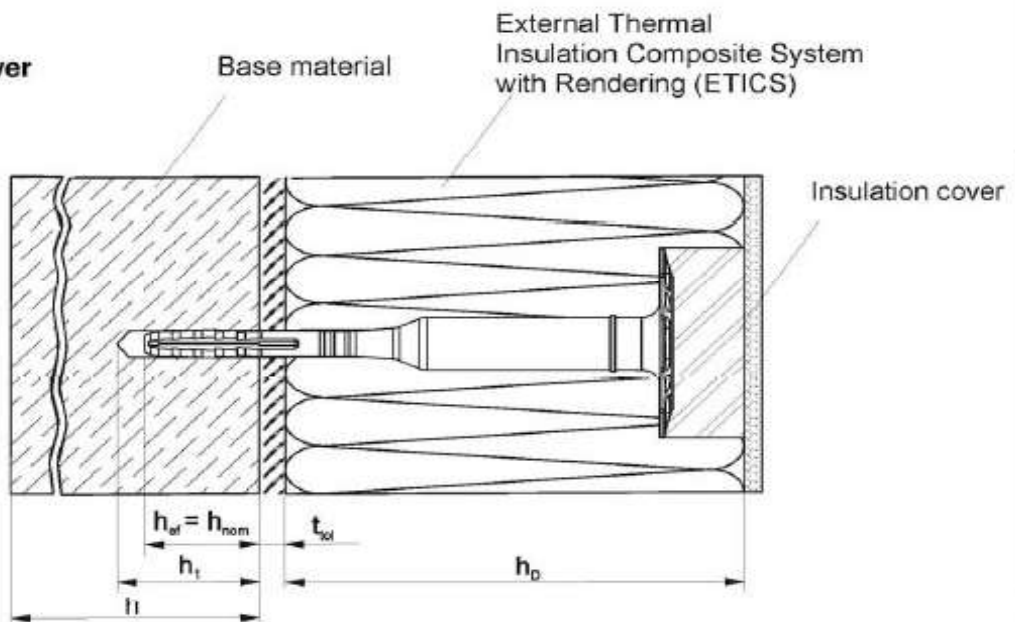
Intended use: TSBD, TSBDL

Annex A 1

**TSBD +
Insulation cover**



**TSBDL +
Insulation cover**



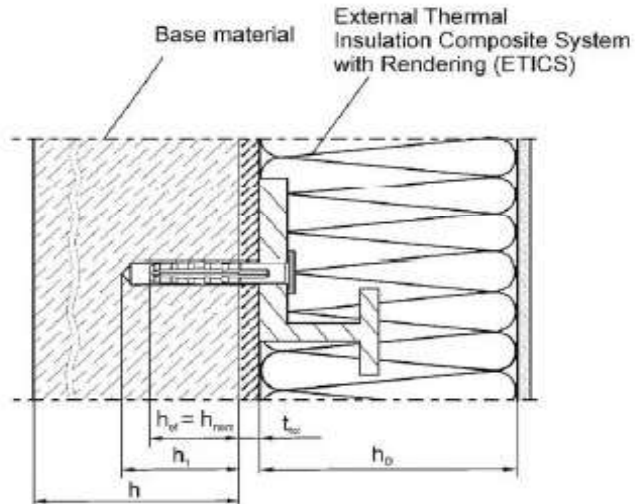
Insulation support -TSBD - TSBDL - TSBD WS - TSBD WSG

Product description

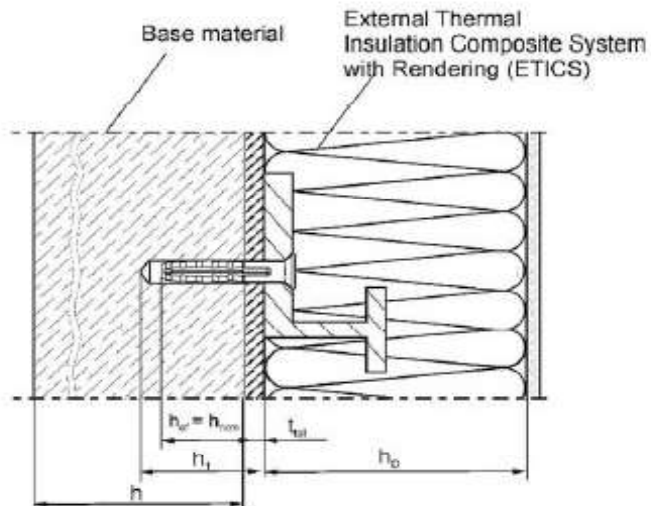
Installed condition with insulation cover: TSBD, TSBDL

Annex A 2

TSBD WS



TSBD WSG



Legend

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

Insulation support -TSBD - TSB DL - TSBD WS - TSBD WSG

Product description

Installed condition: TSBD WS, TSBD WSG

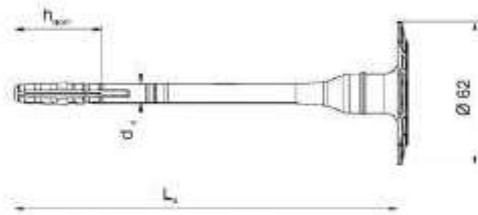
Annex A 3

TSBD

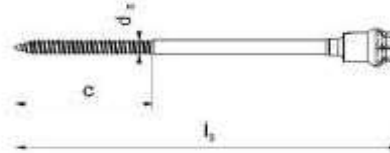


Marking

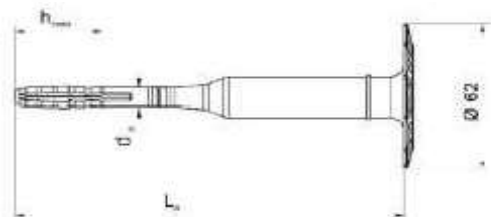
- Company logo - (KEW[®])
- Anchor type - (TSBD )
- (TSBDL )
- Diameter - (60)
- Length of anchor - (e.g. 160)



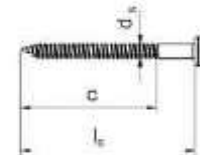
Special screw with special head



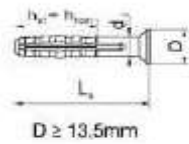
TSBDL



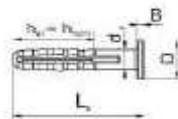
Special screw



TSBD WS / WSG

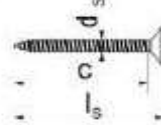


$D \geq 13,5\text{mm}$



$B \geq 2,5\text{mm}$
 $D \geq 16\text{mm}$

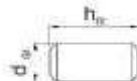
Special screw



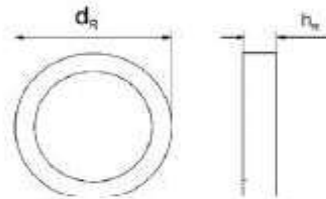
Installation tool



Anchor cap



Insulation cover



Insulation support - TSBD - TSBDL - TSBD WS - TSBD WSG

Product description

Marking of the anchor sleeve, dimensions, installation tool

Annex A 4

Table A1: Dimensions TSBD

Anchor type	Anchor sleeve				Special screw		
	L _a min [mm]	L _a max [mm]	d _d [mm]	h _{ef} [mm]	d _s [mm]	c [mm]	l _s [mm]
TSBD Use category (A-B-C)	100	440	8	30	5,5	52	L_a + 5mm
TSBD Use category (D-E)	100	440	8	30 50	5,5	52	L_a + 5mm
Determination of max. thickness of insulation: h_D = L_a - h_{nom} - t_{tol}							
e.g.: TSBD 8x160	L _a = 160		h _{ef} = 30		t _{tol} = 10		
thickness of insulation material h_{D,max} = 120							
e.g.: TSBD 8x160	L _a = 160		h _{ef} = 50		t _{tol} = 10		
thickness of insulation material h_{D,max} = 100							
Determination of max. thickness of insulation: h_D = L_a - h_{nom} - t_{tol} + Insulation cover							
e.g.: TSBD 8x160 With insulation cover 20mm	L _a = 160		h _{ef} = 30		t _{tol} = 10		
thickness of insulation material h_{D,max} = 140							
e.g.: TSBD 8x160 With insulation cover 20mm	L _a = 160		h _{ef} = 50		t _{tol} = 10		
thickness of insulation material h_{D,max} = 120							

Table A2: Dimensions TSBDL

Anchor type	Anchor sleeve				Special screw			
	L _a min [mm]	L _a max [mm]	d _d [mm]	h _{ef} [mm]	d _s [mm]	c [mm]	l _s min [mm]	l _s max [mm]
TSBDL Use category (A-B-C)	100	440	8	30	5,5	52	70	310
TSBDL Use category (D-E)	100	440	8	30 50	5,5	52	70	310
Determination of max. thickness of insulation: h_D = L_a - h_{nom} - t_{tol}								
e.g.: TSBDL 8x160	L _a = 160		h _{ef} = 30		t _{tol} = 10			
thickness of insulation material h_{D,max} = 120								
e.g.: TSBDL 8x160	L _a = 160		h _{ef} = 50		t _{tol} = 10			
thickness of insulation material h_{D,max} = 100								
Determination of max. thickness of insulation: h_D = L_a - h_{nom} - t_{tol} + Insulation cover								
e.g.: TSBDL 8x160 With insulation cover 20mm	L _a = 160		h _{ef} = 30		t _{tol} = 10			
thickness of insulation material h_{D,max} = 140								
e.g.: TSBDL 8x160 With insulation cover 20mm	L _a = 160		h _{ef} = 50		t _{tol} = 10			
thickness of insulation material h_{D,max} = 120								

Insulation support •TSBD • TSBDL • TSBD WS • TSBD WSG

Product description
Dimensions: TSBD, TSBDL

Annex A 5

Table A3: Dimensions TSD WS / WSG

Anchor type	Anchor sleeve				Special screw		
	L _a min [mm]	L _a max [mm]	d _d [mm]	h _{ef} [mm]	d _s [mm]	c [mm]	l _s [mm]
TSD WS / WSG Use category (A-B-C)	50	250	8	30	5,5	52	L_a + 5mm
TSD WS / WSG Use category (D-E)	70	250	8	30	50	52	L_a + 5mm

Table A4: Dimensions Insulation cover and Anchor cap

Anchor type	Insulation cover		Anchor cap	
	d _R [mm]	h _R [mm]	d _{St} [mm]	h _{St} [mm]
TSD	66	20	-	-
TSDL	66	20	13	30

Table A5: Materials

Member	Material
Anchor sleeve	Polypropylen, colour: papyrus white
Special screw	Steel, galvanized A2L or A2K according to EN ISO 4042:2001-01
	Stainless steel; mat.No. 1.4401 – 1.4571 according to EN ISO 3506-01:2010-04
Special head on Special screw	PA GF
Anchor cap	Polystyrene
Insulation cover	Polystyrene
	Mineral wool

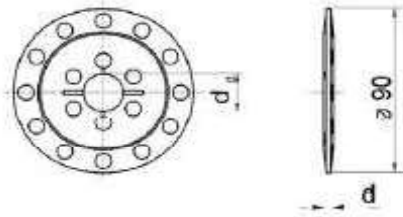
Insulation support -TSD - TSDL - TSD WS - TSD WSG**Product description**

Dimensions: TSD WS, TSD WSG, anchor cap, insulation cover, materials

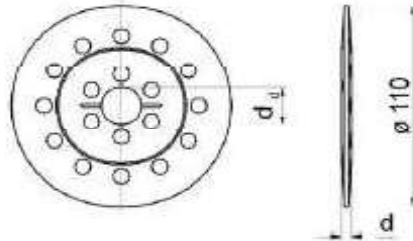
Annex A 6

Insulation discs

DSB 90



DSB 110



DSB 140

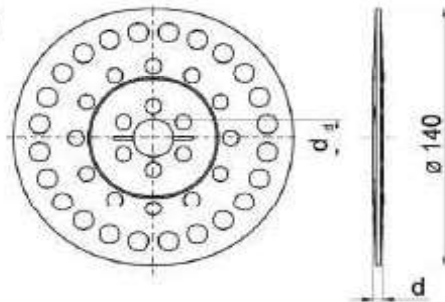


Table A6: Insulation discs, diameters and material

Insulation discs	$\varnothing D$ [mm]	$\varnothing d_i$ [mm]	d [mm]	Material
DSB 90	90	20	5	PA 6, PP
DSB 110	110	20	5	PA 6, PP
DSB 140	140	20	5	PA 6, PP

Insulation support -TSBD - TSB DL - TSBD WS - TSBD WSG

Product description

Additional plates in combination with TSBD, TSB DL

Annex A 7

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
- Hollow or perforated masonry (use category C), according to Annex C 1 and C 5
- 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.
- 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

Insulation support -TSBD • TSB DL • TSB D WS • TSB D WSG

Intended Use
Specifications

Annex B 1

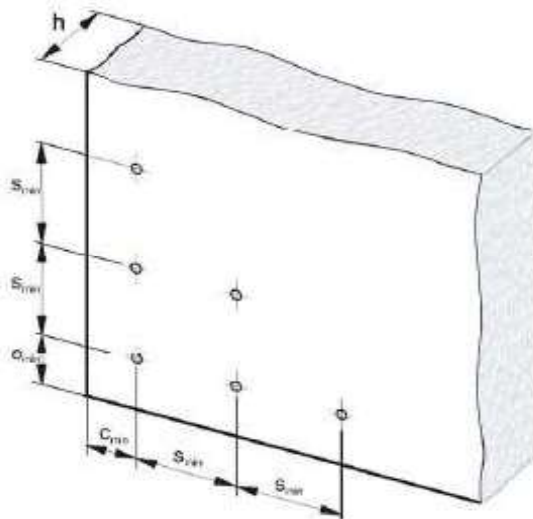
Table B1: Installation parameters

Anchor type		TSBD, TSDL		
		Use category		
		A-B-C	D-E	
Drill hole diameter	$d_0 =$ [mm]	8	8	
Cutting diameter of drill bit	$d_{cut} \leq$ [mm]	8,45	8,45	
Depth of drilled hole to deepest point	$h_i \geq$ [mm]	40	40	60
Effective anchorage depth	$h_{ef} =$ [mm]	30	30	50

Table B2: Minimum distances and dimensions

		TSBD, TSDL
Minimum thickness of member	$h =$ [mm]	100
Minimum allowable spacing	$s_{min} =$ [mm]	100
Minimum allowable edge distance	$c_{min} =$ [mm]	100

Edge and spacing distances

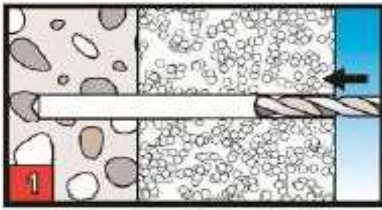


Insulation support • TSBD • TSDL • TSBD WS • TSBD WSG

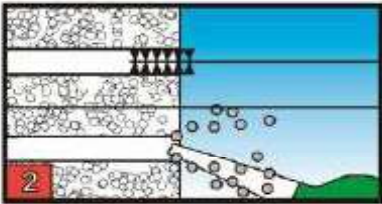
Intended Use
Installation parameters,
Edge distances and spacing

Annex B 2

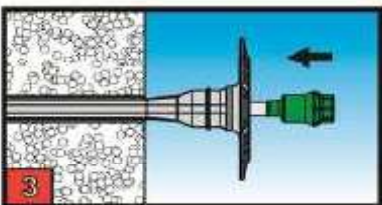
Installation instructions TSBD surface-flush mounted



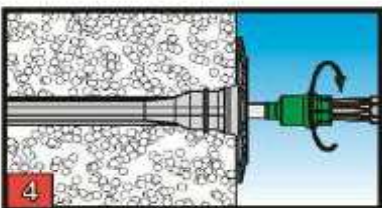
Create a hole considering the drill method according Annex C 1



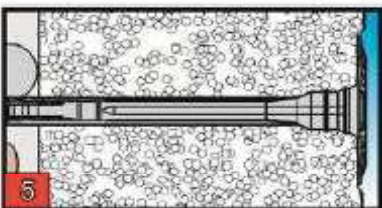
Holes to be cleaned of drilling dust



Insert the anchor into the hole until the plate rests on the insulation.



Set the screw with the matching bit



Surface-flush mounted

Insulation support -TSBD • TSB DL • TSBD WS • TSBD WSG

Intended Use

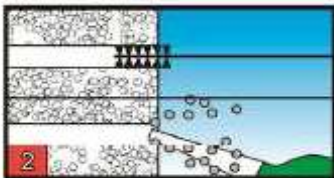
Installation instructions TSBD - surface-flush mounted

Annex B 3

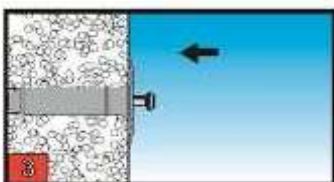
Installation instructions TSBDL surface-flush mounted



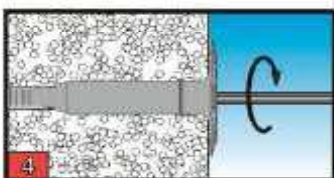
Create a hole considering the drill method according Annex C 1



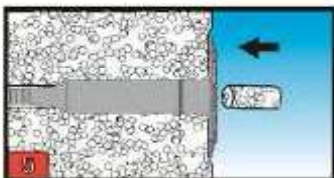
Holes to be cleaned of drilling dust



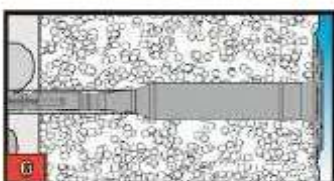
Insert the anchor into the hole until the plate rests on the insulation.



Set the screw with the matching bit



Put the anchor cap in to the anchor



Surface-flush mounted

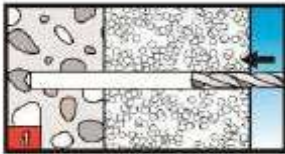
Insulation support - TSBD - TSBDL - TSBD WS - TSBD WSG

Intended Use

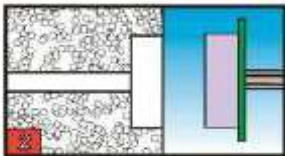
Installation instructions TSBDL - surface-flush mounted

Annex B 4

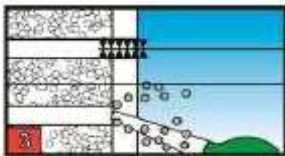
Installation instructions TSBD countersunk



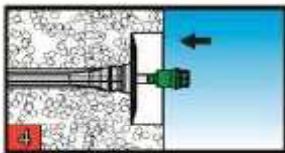
Create a hole considering the drill method according Annex C 1



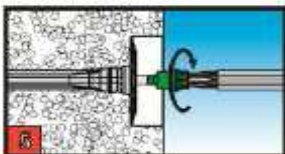
Countersink the insulation



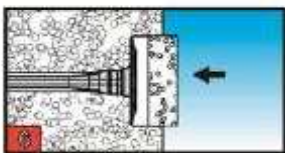
Holes to be cleaned of drilling dust



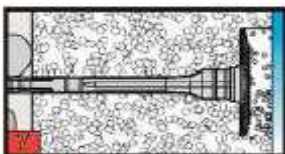
Insert the anchor into the hole until the plate rests on the insulation.



Tighten the screw with the matching bit



Put the Insulation cover into the insulation



countersunk installation

Insulation support - TSBD - TSBDL - TSBD WS - TSBD WSG

Intended Use

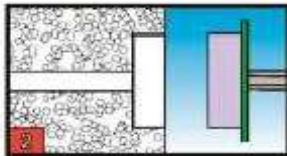
Installation instructions TSBD – countersunk installation

Annex B 5

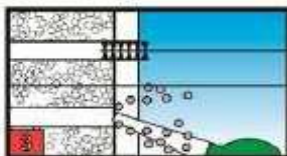
Installation instructions TSBDL countersunk



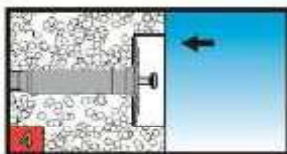
Create a hole considering the drill method according Annex C 1



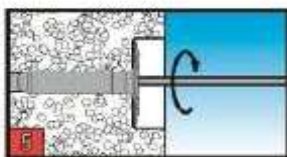
Countersink the insulation



Holes to be cleaned of drilling dust



Insert the anchor into the hole until the plate rests on the insulation.



Set the screw with the matching bit



Put the Insulation cover into the insulation



countersunk installation

Insulation support ·TSBD · TSBDL · TSBW WS · TSBW WSG

Intended Use

Installation instructions TSBDL - countersunk installation

Annex B 6

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

Base material	Bulk density-class ρ [kg/dm ³]	Minimum compressive strength f_k [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 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 5		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 5		1,2
Vertically perforated clay bricks, HLz e.g. acc. to DIN 105-100:2012-01 / EN 771-1:2011 with 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 with outer web thickness ≥ 20 mm	≥1.4	12	Vertically perforation up to 15%		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 5		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 5		0,9
Vertically perforated clay bricks, Hlz 250x380x235	≥1.0	6	according to Annex C 5		0,5
Lightweight aggregate concrete, LAC 4 e.g. acc. to EN 1520:2011 / EN 771-3:2011	≥1.0	4	$h_{ef} \geq 30\text{mm}$ $h_{ef} \geq 50\text{mm}$		Hammer drilling
Lightweight aggregate concrete, LAC 6 e.g. acc. to EN 1520:2011 / EN 771-3:2011	≥1.0	6	$h_{ef} \geq 30\text{mm}$ $h_{ef} \geq 50\text{mm}$	0,5 1,2	
autoclaved aerated concrete PP4-0,5 e.g. acc. to DIN V 4165-100:2005-10 / EN 771-4:2011	≥0,5	4	$h_{ef} \geq 30\text{mm}$ $h_{ef} \geq 50\text{mm}$	Rotary drilling	0,30 0,75

Insulation support -TSBD • TSB DL • TSB D WS • TSB D WSG

Performances

Characteristic resistance of the anchor

Annex C 1

Table C2: Point thermal transmittance according to EOTA Technical Report TR 025:2007-06

Anchor type	thickness of insulation h_D [mm]	Point thermal transmittance χ [W/K]
TSBD specific screw of galvanized steel	≤ 150 mm	0,003
TSBD specific screw of galvanized steel	> 150 mm	0,002
TSBD specific screw of stainless steel	≤ 150 mm	0,002
TSBD specific screw of stainless steel	> 150 mm	0,001

Anchor type	thickness of insulation h_D [mm]	Point thermal transmittance χ [W/K]
TSBD + Insulation cover specific screw of galvanized steel	≤ 150 mm	0,002
TSBD + Insulation cover specific screw of galvanized steel	> 150 mm	0,002
TSBD + Insulation cover specific screw of stainless steel	≤ 150 mm	0,001
TSBD + Insulation cover specific screw of stainless steel	> 150 mm	0,001

Insulation support -TSBD - TSB DL - TSB D WS - TSB D WSG

Performances
Point thermal transmittance

Annex C 2

Continuation of Table C2: Point thermal transmittance according to EOTA Technical Report TR 025:2007-06

Anchor type	thickness of insulation h_D [mm]	Point thermal transmittance χ [W/K]
TSBDL specific screw of galvanized steel	≤80mm	0,002
TSBDL specific screw of galvanized steel	>80mm	0,001
TSBDL specific screw of stainless steel	≤240mm	0,001
TSBDL specific screw of stainless steel	>240mm	0,000

Anchor type	thickness of insulation h_D [mm]	Point thermal transmittance χ [W/K]
TSBDL + Insulation cover specific screw of galvanized steel	≤150mm	0,001
TSBDL + Insulation cover specific screw of galvanized steel	>150mm	0,001
TSBDL + Insulation cover specific screw of stainless steel	≤100mm	0,001
TSBDL + Insulation cover specific screw of stainless steel	>100mm	0,000

Insulation support -TSBD - TSBDL - TSBD WS - TSBD WSG

Performances
Point thermal transmittance

Annex C 3

Table C3: Plate stiffness according to EOTA Technical Report TR 026:2007-06

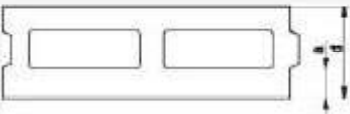
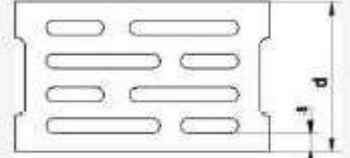
Anchor type	Diameter of anchor plate [mm]	Load resistance of anchor plate [kN]	Plate stiffness [kN/mm]
TSBD	60	2,22	1,6
TSBDL	60	2,22	1,6

Table C4: Displacements

Base material	Bulk-density-class ρ [kg/dm ³]	Minimum compressive strength f_k [N/mm ²]	Tension load	Displacements
			N [kN]	$\delta_m(N)$ [mm]
Concrete C12/15-C50/60 EN 206-1:2000			0,50	0,2
Sand-lime solid bricks, KS DIN V 106:2005-10 / EN 771-2:2011	≥1,8	12	0,50	0,3
Mauerziegel, Mz DIN 105-100:2012-01 / EN 771-1:2011	≥1,7	12	0,50	0,3
Lightweight concrete solid blocks, Vbl 2 DIN V 18152-100:2005-10 / EN 771-3:2011	≥0,8	2	0,25	0,3
Lightweight concrete solid blocks, Vbl 4 DIN V 18152-100:2005-10 / EN 771-3:2011	≥0,8	4	0,40	0,4
Vertically perforated clay bricks, HLZ DIN 105-100:2012-01 / EN 771-1:2011	≥1,0	12	0,30	0,1
Vertically perforated sand-lime bricks, KSL DIN V 106:2005-10 / EN 771-2:2011	≥1,4	12	0,50	0,3
Lightweight concrete hollow blocks, 4K Hbl DIN V 18151-100:2005-10 / EN 771-3:2011	≥0,9	2	0,25	0,1
Lightweight concrete hollow blocks, 1K Hbl DIN V 18151-100:2005-10 / EN 771-3:2011	≥0,8	2	0,30	0,2
Vertically perforated clay bricks, Hlz 250x380x235	≥1,0	6	0,15	0,1
Lightweight aggregate concrete, LAC 4 EN 1520:2011 / EN 771-3:2011	≥1,0	4	$h_{ef} > 30$ mm: 0,15	0,1
			$h_{ef} \geq 50$ mm: 0,30	0,2
Lightweight aggregate concrete, LAC 6 EN 1520:2011 / EN 771-3:2011	≥1,0	6	$h_{ef} > 30$ mm: 0,15	0,1
			$h_{ef} \geq 50$ mm: 0,40	0,2
autoclaved aerated concrete DIN V 4165-100:2005-10 / EN 771-4:2011	≥0,5	4	$h_{ef} > 30$ mm: 0,10	0,15
			$h_{ef} \geq 50$ mm: 0,25	0,01

Insulation support -TSBD - TSBDL - TSBD WS - TSBD WSG
Performances
 Plate stiffness
 Displacements
Annex C 4

Table C5: Geometry of Hbl acc. DIN V 18151-100:2005-10 / EN 771-3:2011

Geometry	Thickness of brick d [mm]	Outer web in longitudinal direction a [mm]
	175	50
	240 300 365	30

The anchor shall be placed in the brick in such way, that the spreading part of the expansion sleeve is located in the outer web.

Table C6: Geometry of Vbl according to DIN V 18152-100:2005-10 / EN 771-3:2011

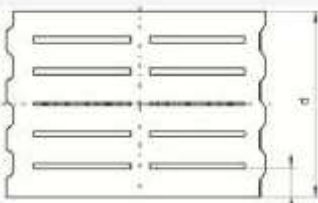

Geometry	Thickness of brick d [mm]	Outer web in longitudinal direction a [mm]
	248 300 370	≥ 43

Table C7: Geometry of vertically perforated clay bricks Hlz 250x380x235

Geometry	Thickness of brick d [mm]	Outer web in longitudinal direction a [mm]
	250	≥ 16

Insulation support ·TSBD · TSBDL · TSBD WS · TSBD WSG

Performances

Geometry of lightweight concrete hollow blocks and solid blocks,
vertically perforated clay brick 250x380x235

Annex C 5