Deutsches Institut für Bautechnik

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Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

European Technical Assessment ETA-04/0023 of 5 June 2023

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	ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U
Product family to which the construction product belongs	Plastic anchor for fixing of external thermal insulation composite systems with rendering
Manufacturer	EJOT SE & Co. KG Astenbergstraße 21 57319 Bad Berleburg DEUTSCHLAND
Manufacturing plant	EJOT manufacturing plant 1, 2, 3, 4
This European Technical Assessment contains	23 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 edition 10/2017
This version replaces	ETA-04/0023 issued on 17 October 2017

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Specific Part

1 Technical description of the product

The screwed-in anchor type ejotherm STR U and ejotherm STR U 2G with a plate consists of a plastic part made of virgin polyethylene, an accompanying specific screw made of stainless steel or galvanised steel and an anchor cap made of polystyrene (for mounting the anchor on the surface of the insulating material) or an insulation cover made of polystyrene or mineral wool (for deep mounting of the anchor in the insulating material).

For mounting on the surface the anchor may additionally be combined with the anchor plates SBL 140 plus, VT 90 or VT 2G, made of polyamide.

The screwed-in anchor type ejotherm SDK U with a collar consists of a plastic part made of virgin polyethylene and an accompanying specific screw of stainless steel or galvanised steel.

An illustration and the description of the product are 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 - Characteristic resistance under tension load - Minimum edge distance and spacing	 See Annex C 1 See Annex B 2
Displacements	See Annex C 3
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.

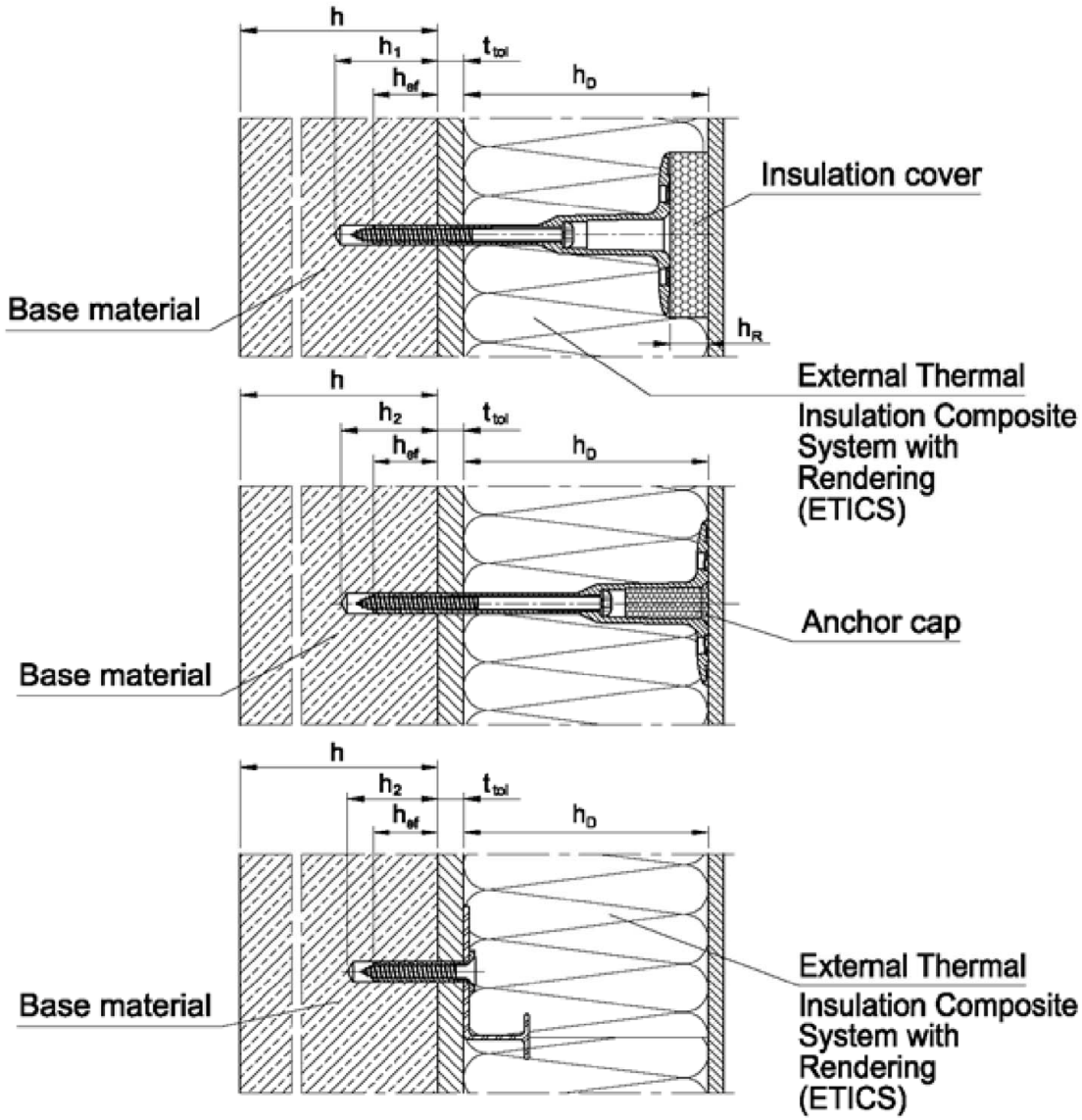
Issued in Berlin on 5 June 2023 by Deutsches Institut für Bautechnik

Dipl.-Ing. Beatrix Wittstock
Head of Section

beglaubigt:
Ziegler

Deutsches Institut für Bautechnik DIBt

ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U



Intended use

- Anchorage of ETICS in concrete and masonry
- Anchorage of ETICS in autoclaved aerated concrete and lightweight aggregate concrete

Legend:

h_D	=	thickness of insulation material
h_{ef}	=	effective anchorage depth
h	=	thickness of member (wall)
$h_{1,2}$	=	depth of drilled hole to deepest point
h_R	=	thickness of insulation cover
t_{tol}	=	thickness of equalizing layer or non-load-bearing coating

ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U	Annex A 1
Product description Installed condition	

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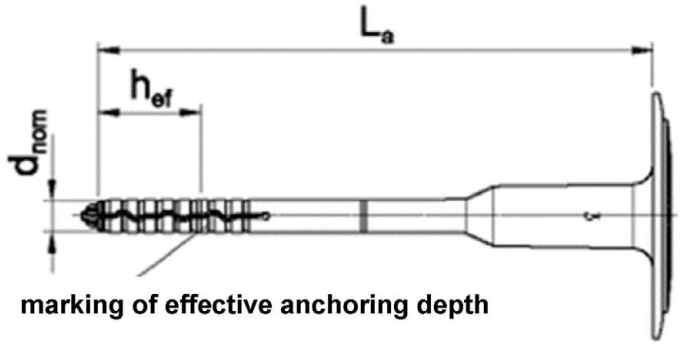
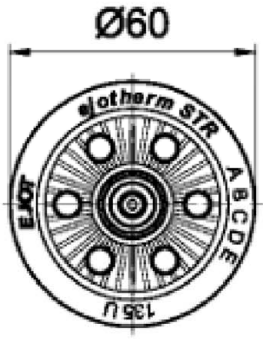
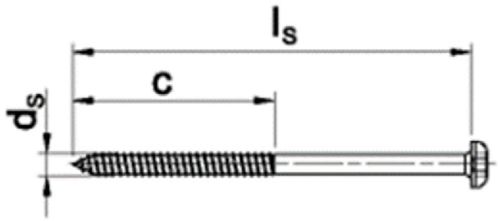
Components for deep mounting in base material group A, B, C, D

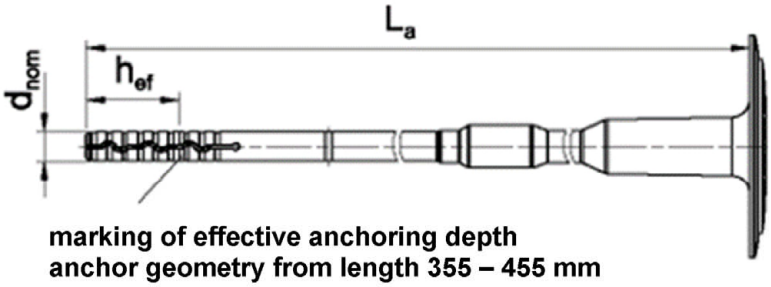


marking of effective anchoring depth



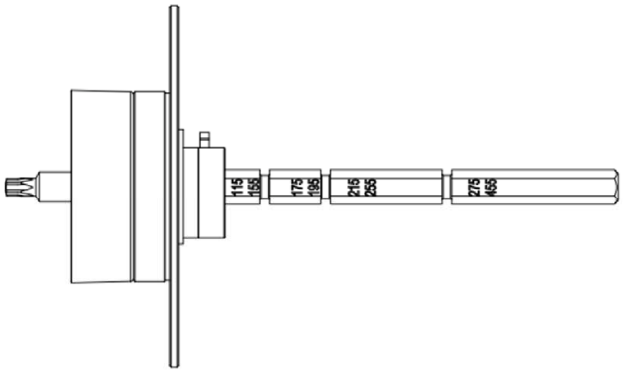


Marking
Identifying mark: EJOT
Anchor type: ejotherm STR U
Anchor length: z.B. 135
Base material group: A, B, C, D, E

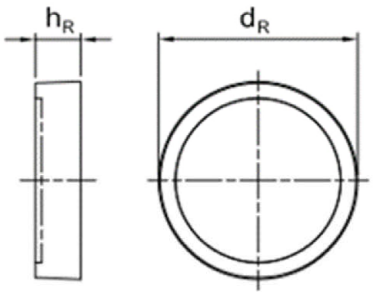


marking of effective anchoring depth
anchor geometry from length 355 – 455 mm

ejotherm STR U / STR U 2G mounting tool



Insulation cover



ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U	Annex A 2
Product description Components for deep mounting, ejotherm STR U, base material group A, B, C, D	

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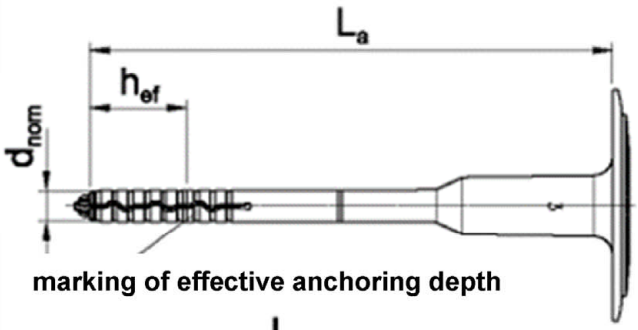
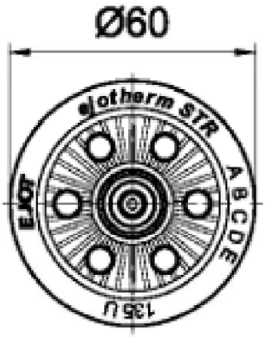
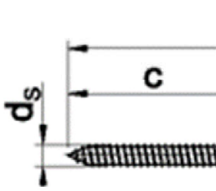
Components for mounting flushed on the surface in base material group A, B, C, D

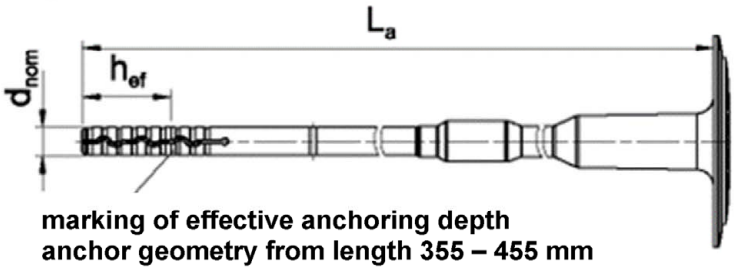


marking of effective anchoring depth



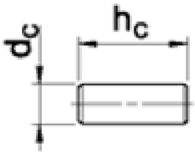
Marking
Identifying mark: EJOT
Anchor type: ejotherm STR U
Anchor length: z.B. 135
Base material group: A, B, C, D, E



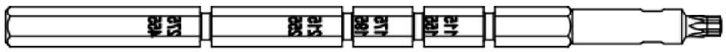


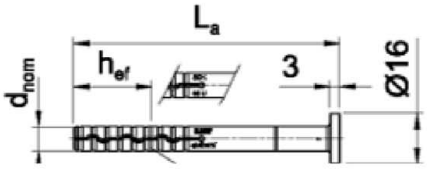
marking of effective anchoring depth
anchor geometry from length 355 – 455 mm

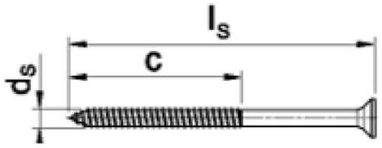
Anchor cap (to lock up the anchor in case of mounting on the surface)



ejotherm STR U / STR U 2G mounting







marking of effective anchoring depth

Marking:
Identifying mark: EJOT
Anchor type: ejotherm SDK U
Anchor length: e.g. 85

Table A1: Dimensions

Measures in mm

Anchor Type	Colour	Anchor sleeve				Accompanying specific screw				Anchor cap		Insulation cover	
		d_{nom}	h_{ef}	min L_a	max L_a	d_s	c	min l_s	max l_s	h_c	d_c	h_R	d_R
STR U	nature	8	25	115	455	5,5	60	78	418	23	15	15	66
SDK U	nature	8	25	45	125	5,5	60	50	130				

Determination of maximum thickness of insulation h_D for ejotherm STR U:

$h_D = L_a - t_{tol} - h_{ef}$ (L_a = e.g. 115; t_{tol} = 10)

e.g. $h_D = 115 – 10 – 25$

$h_{Dmax.} = 80$

ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U

Annex A 3

Product description
Components for mounting on the surface, ejotherm STR U, SDK U
base material group A, B, C, D, dimensions

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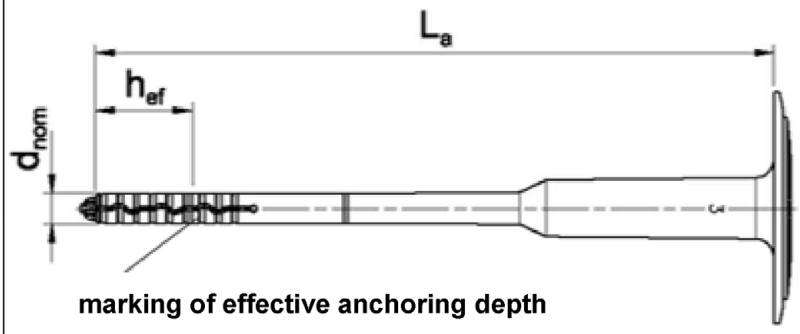
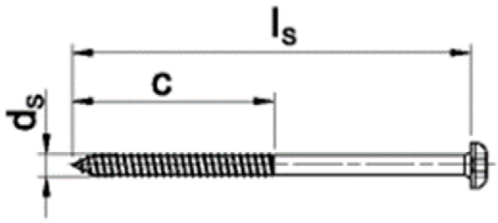
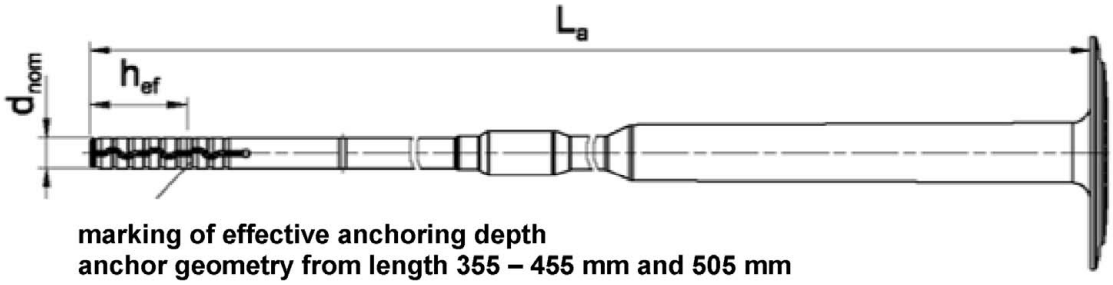
Components for deep mounting in base material group A, B, C, D



marking of effective anchoring depth

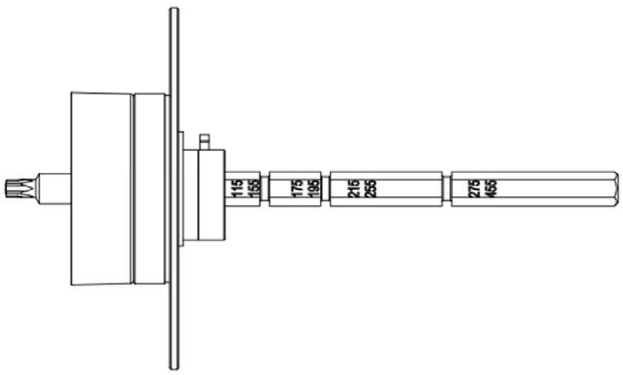


Marking
Identifying mark: EJOT
Anchor type: ejotherm STR U 2G
Anchor length: z.B. 175
Base material group: A, B, C, D, E

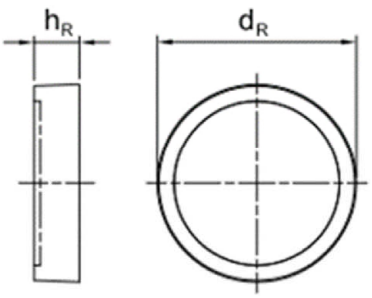


marking of effective anchoring depth
anchor geometry from length 355 – 455 mm and 505 mm

ejotherm STR U / STR U 2G mounting tool

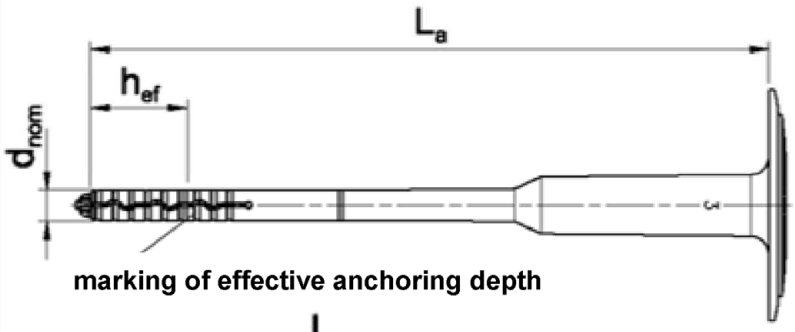


Insulation cover



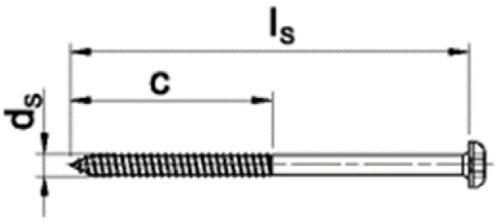
ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U	Annex A 4
Product description Components for deep mounting, ejotherm STR U 2G, base material group A, B, C, D	

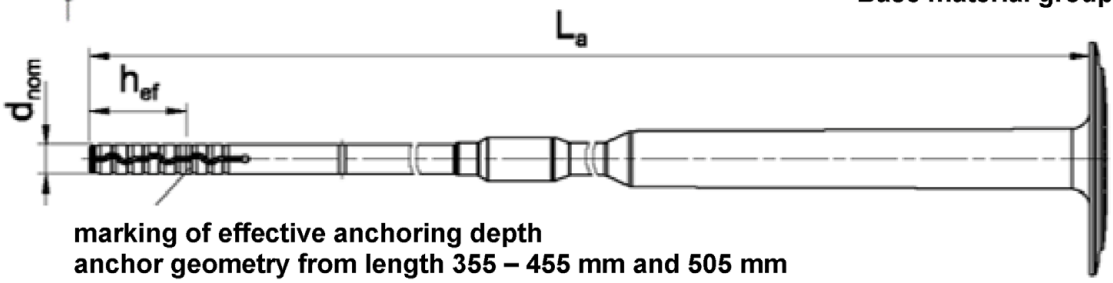
Components for mounting flushed on the surface in base material group A, B, C, D



marking of effective anchoring depth

Marking
Identifying mark: EJOT
Anchor type: ejotherm STR U 2G
Anchor length: z.B. 175
Base material group: A, B, C, D, E





marking of effective anchoring depth
anchor geometry from length 355 – 455 mm and 505 mm

ejotherm STR U / STR U 2G mounting tool

Anchor cap (to lock up the anchor in case of mounting on the surface)

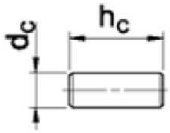


Table A2: Dimensions

Measures in mm

Anchor Type	Colour	Anchor sleeve				Accompanying specific screw				Anchor cap		Insulation cover	
		d_{nom}	h_{ef}	min L_a	max L_a	d_s	c	min l_s	max l_s	h_c	d_c	h_R	d_R
STR U 2G	nature	8	25	115	455	5,5	60	78	338	23	15	15	66
STR U 2G	nature	8	25		505	5,5	60		398	23	15	15	66

Determination of maximum thickness of insulation h_D for ejotherm STR U 2G:

h_D = L_a - t_{tol} - h_{ef} (L_a = e.g. 115; t_{tol} = 10)

e.g. h_D = 115 – 10 – 25

$h_{Dmax.}$ = 80

ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U	Annex A 5
Product description Components for mounting on the surface, ejotherm STR U 2G base material group A, B, C, D, dimensions	

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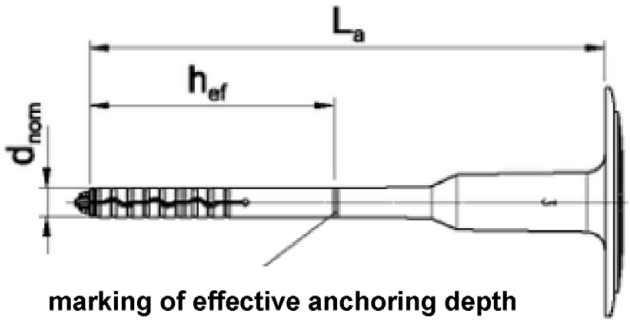
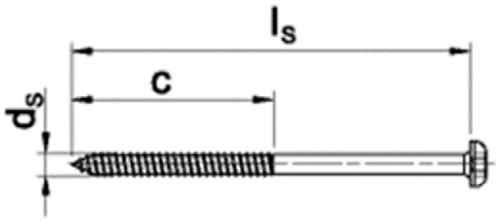
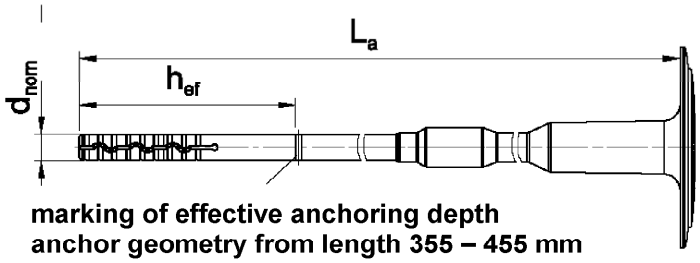
Components for deep mounting in base material group E

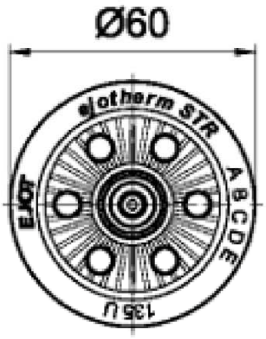


marking of effective anchoring depth



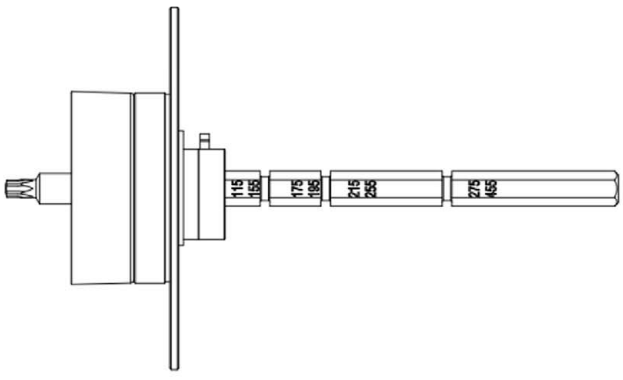


marking of effective anchoring depth
anchor geometry from length 355 – 455 mm

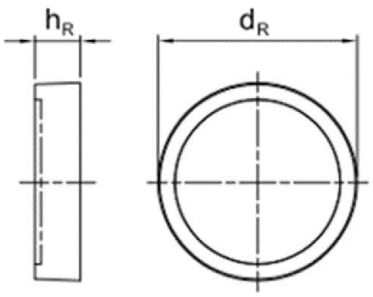


Marking
Identifying mark: EJOT
Anchor type: ejotherm STR U
Anchor length: z.B. 135
Base material group: A, B, C, D, E

ejotherm STR U / STR U 2G mounting tool



Insulation cover



ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U	Annex A 6
Product description Components for deep mounting, ejotherm STR U, base material group E	

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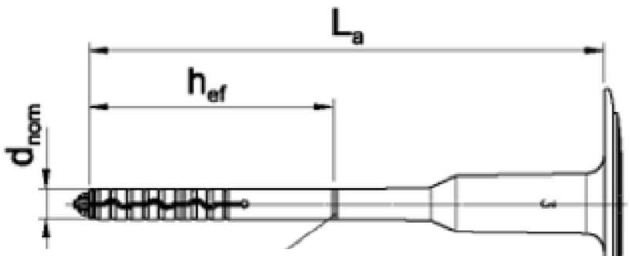
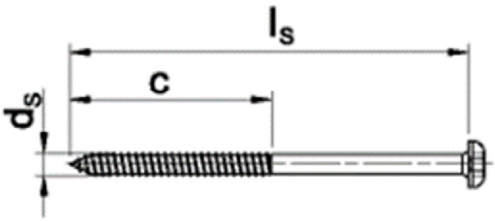
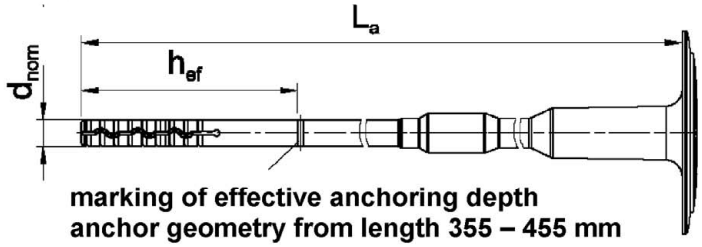
Components for mounting flushed on the surface in base material group E



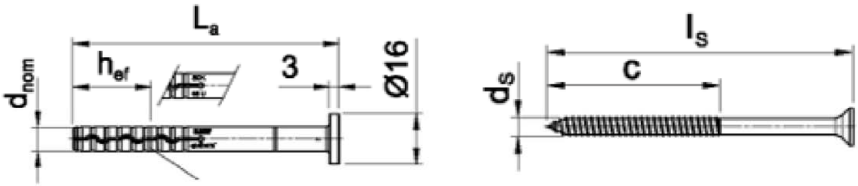
marking of effective anchoring depth



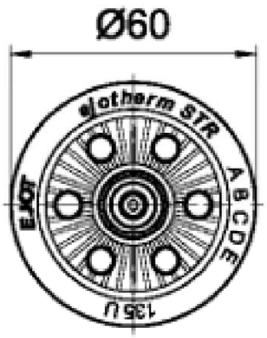


marking of effective anchoring depth
anchor geometry from length 355 – 455 mm

ejotherm STR U / STR U 2G mounting tool

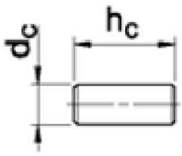


marking of effective anchoring depth



Marking
Identifying mark: EJOT
Anchor type: ejotherm STR U
Anchor length: z.B. 135
Base material group: A, B, C, D, E

Anchor cap (to lock up the anchor in case of mounting on the surface)



Marking:
Identifying mark: EJOT
Anchor type: ejotherm SDK U
Anchor length: e.g. 85

Table A3: Dimensions

Measures in mm

Anchor Type	Colour	Anchor sleeve				Accompanying specific screw				Anchor cap		Insulation cover	
		d_{nom}	h_{ef}	min L_a	max L_a	d_s	c	min l_s	max l_s	h_c	d_c	h_R	d_R
STR U	nature	8	65	115	455	5,5	60	78	418	23	15	15	66
SDK U	nature	8	65	45	125	5,5	60	50	130				

Determination of maximum thickness of insulation h_D for ejotherm STR U:

$h_D = L_a - t_{tol} - h_{ef}$ (L_a = e.g. 155; t_{tol} = 10)

e.g. $h_D = 155 – 10 – 65$

$h_{Dmax.} = 80$

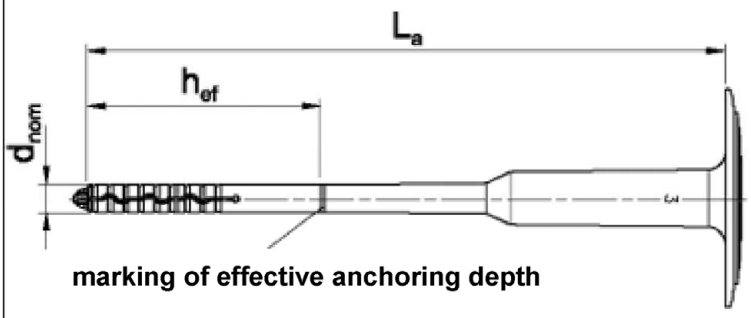
ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U

Product description
Components for mounting on the surface, ejotherm STR U, SDK U
base material group E, dimensions

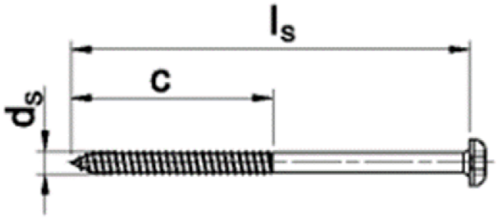
Annex A 7

Deutsches Institut für Bautechnik DIBt

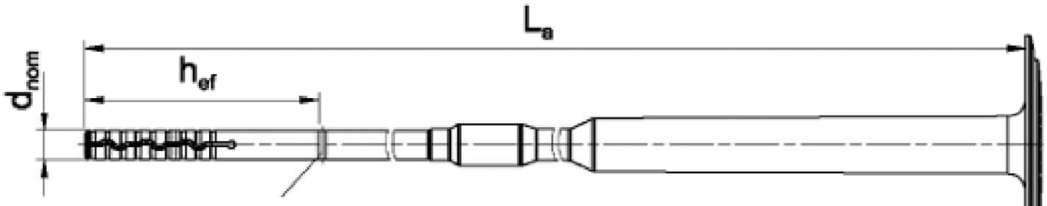
Components for deep mounting in base material group E



marking of effective anchoring depth

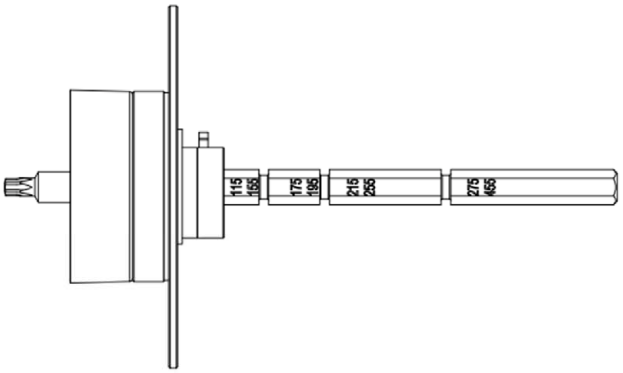


Marking
Identifying mark: EJOT
Anchor type: ejotherm STR U 2G
Anchor length: z.B. 175
Base material group: A, B, C, D, E

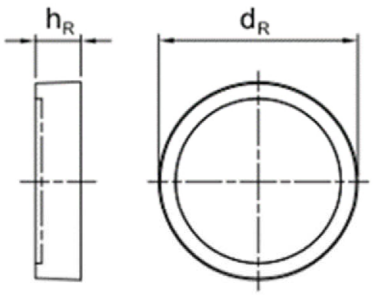


marking of effective anchoring depth
anchor geometry from length 355 – 455 mm and 505 mm

ejotherm STR U / STR U 2G mounting tool



Insulation cover



ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U	Annex A 8
Product description Components for deep mounting, ejotherm STR U 2G, base material group E	

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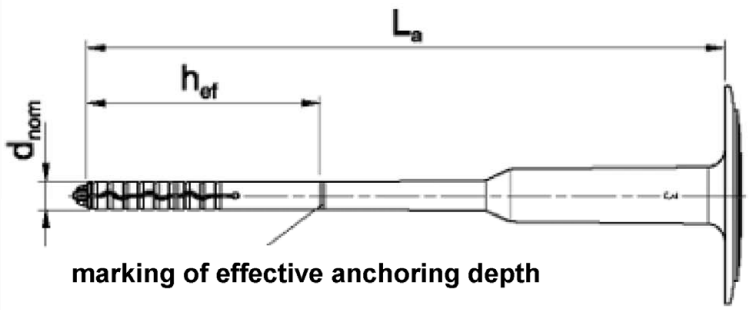
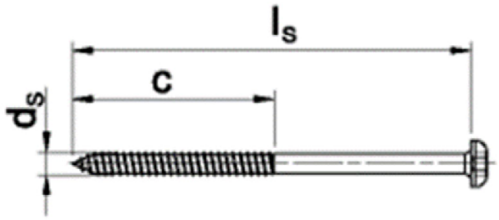
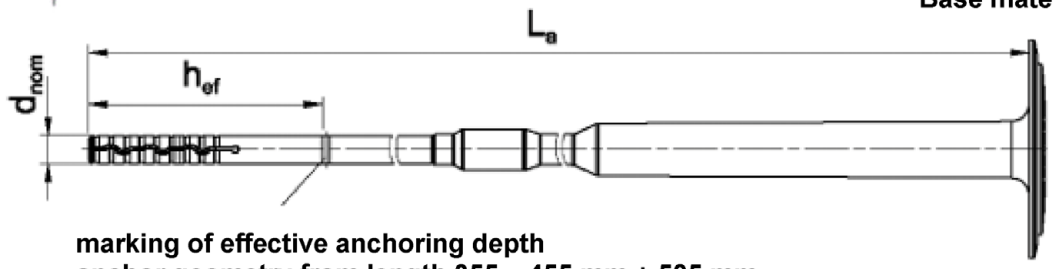
Components for mounting flushed on the surface in base material group E



marking of effective anchoring depth

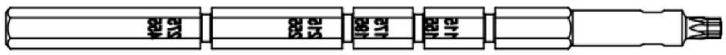


Marking
Identifying mark: EJOT
Anchor type: ejotherm STR U 2G
Anchor length: z.B. 175
Base material group: A, B, C, D, E



marking of effective anchoring depth
anchor geometry from length 355 – 455 mm + 505 mm

ejotherm STR U / STR U 2G mounting tool



Anchor cap (to lock up the anchor in case of mounting on the surface)

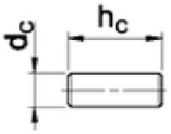


Table A4: Dimensions

Measures in mm

Anchor Type	Colour	Anchor sleeve				Accompanying specific screw				Anchor cap		Insulation cover	
		d_{nom}	h_{ef}	min L_a	max L_a	d_s	c	min l_s	max l_s	h_c	d_c	h_R	d_R
STR U 2G	nature	8	65	115	455	5,5	60	78	338	23	15	15	66
STR U 2G	nature	8	65		505	5,5	60		398	23	15	15	66

Determination of maximum thickness of insulation h_D for ejotherm STR U 2G:

$h_D = L_a - t_{tol} - h_{ef}$ (L_a = e.g. 155; t_{tol} = 10)

e.g. $h_D = 155 – 10 – 65$

$h_{Dmax.} = 80$

ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U	Annex A 9
Product description Components for mounting on the surface, ejotherm STR U 2G base material group E, dimensions	

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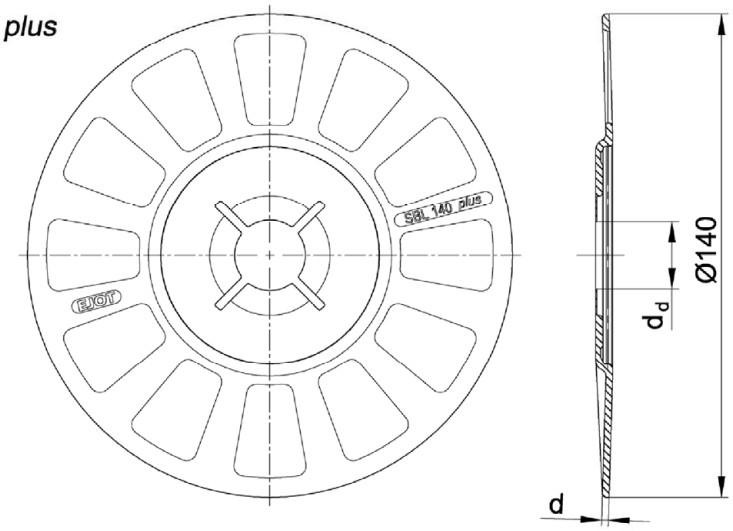
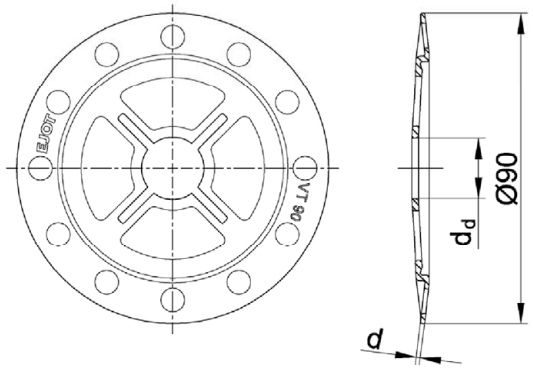
SBL 140 *plus*



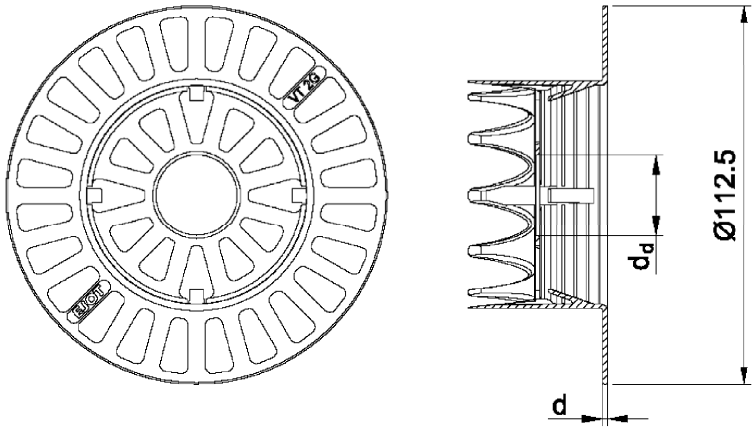
SBL 140 plus	
Farbe	nature
d_d [mm]	20,0
d [mm]	2,0

VT 90



VT 90	
Farbe	nature
d_d [mm]	18,5
d [mm]	1,2

VT 2G



VT 2G	
Farbe	nature
d_d [mm]	29,0
d [mm]	1,5

ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U

Annex A 10

Product description
Anchor plates in combination with ejotherm STR U and ejotherm STR U 2G

Table A5: Materials	
Name	Materials
Anchor sleeve	virgin polyethylene PE-HD colour: nature, yellow, orange, red, blue, grey
Insulation cover	Polystyrene PS 20
	Mineral wool type HD
Insulation cap	Polystyrene PS 30
Specific screw	Steel, electro galvanized ≥ 5 µm according EN ISO 4042:2018 blue passivated
	Stainless steel according EN ISO 3506-1:2020 material number 1.4401 or 1.4571 material number 1.4301 or 1.4567

Table A6: Anchor plate, diameter and materials

anchor plate	Ø D [mm]	Ø d_d [mm]	d [mm]	material
VT 90	90	18,5	1,2	PA 6, PA GF 50
SBL 140 plus	140	20,0	2,0	PA GF 50
VT 2G	112	29,0	1,5	PA GF 50

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Specifications of intended use

Anchorages 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
- autoclaved aerated concrete (base material group E), 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 γ_M = 2,0 and γ_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 ≤ 6 weeks

ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U	Annex B 1
Intended use Specifications	

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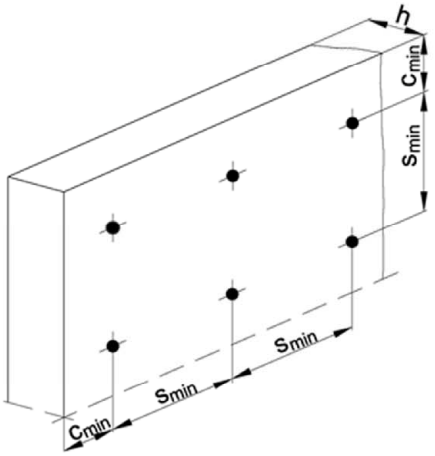
Table B1: Installation parameters					
Anchor type		ejotherm STR U / STR U 2G		ejotherm SDK U	
Base material group		A B C D	E	A B C D	E
Drill hole diameter	d_0 [mm]	8	8	8	8
Cutting diameter of drill bit	d_{cut} [mm] ≤	8,45	8,45	8,45	8,45
Depth of drilled hole to deepest point					
- deep mounting	h_1 [mm] ≥	50	90	-	-
- mounting on the surface	h_2 [mm] ≥	35	75	35	75
Effective anchorage depth	h_{ef} [mm] ≥	25	65	25	65

Table B2: Anchor distances and dimensions of members			
Anchor type		ejotherm STR U / STR U 2G / SDK U	
Base material group		A B C D	E
Minimum spacing	s_{min} ≥ [mm]	100	100
Minimum edge distance	c_{min} ≥ [mm]	100	100
Minimum thickness of member			
- deep mounting	h ≥ [mm]	100 40 (only thin skins of concrete)	120
- mounting on the surface	h ≥ [mm]	100 40 (only thin skins of concrete)	120

Scheme of distance and spacing



ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U

Intended use
Installations parameters, anchor distances and dimensions of members

Annex B 2

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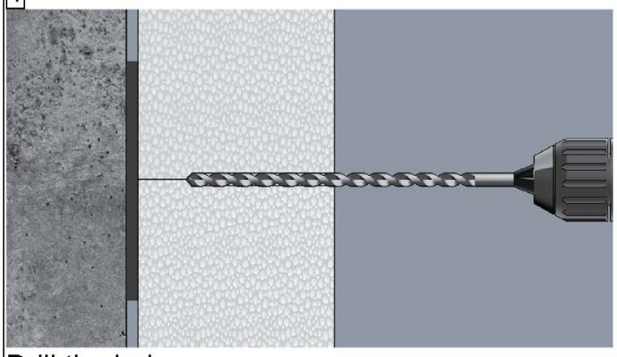
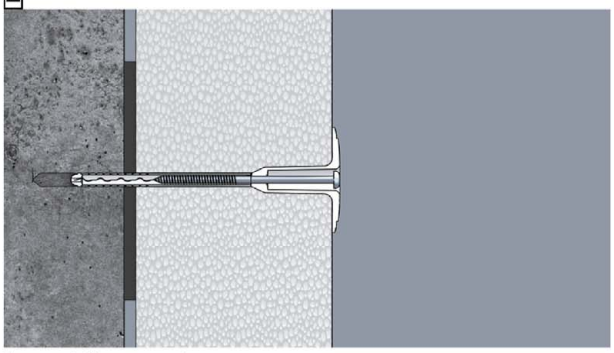
1



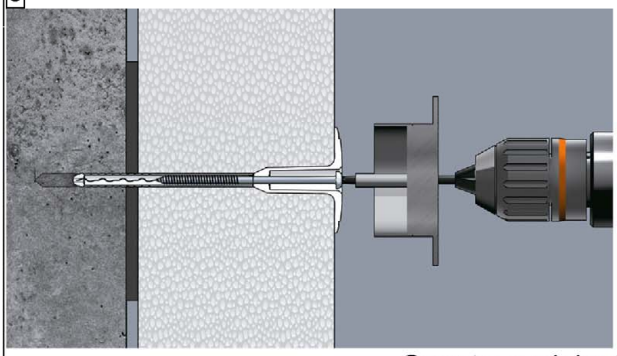
Drill the hole

2



Insert the anchor

3



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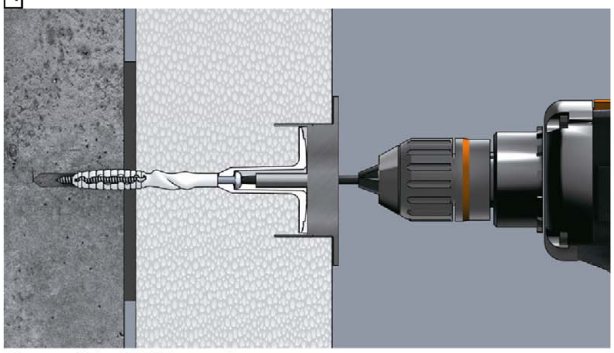
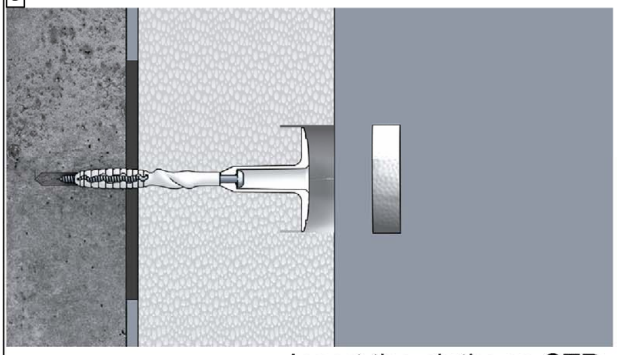


Countersunk installation with STR-tool

5



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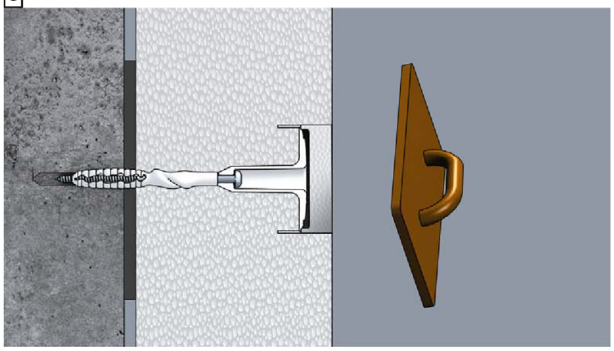

Insert the ejotherm STR - insulation cover with the help of a float

ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U	Annex B 3
Intended use Installation instructions countersunk mounted with STR insulation cover	

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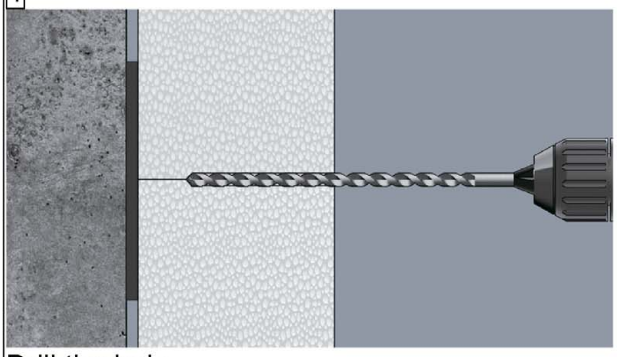
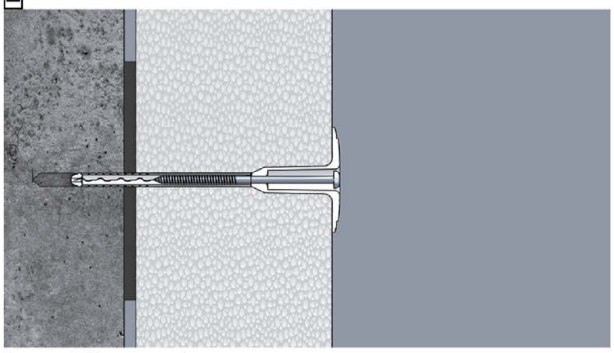
1



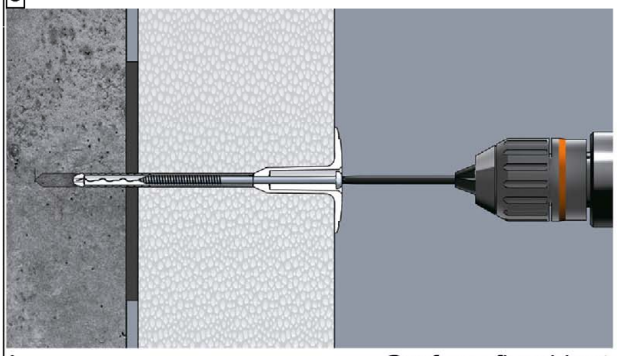
Drill the hole

2



Insert the anchor

3



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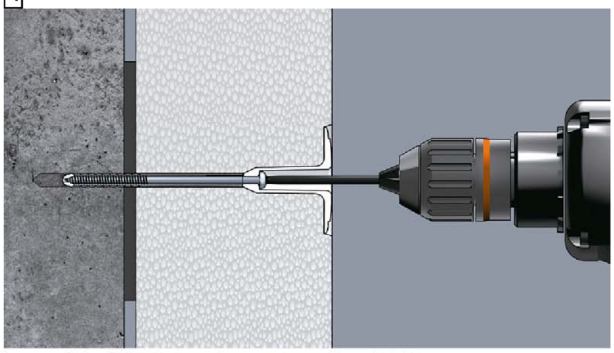
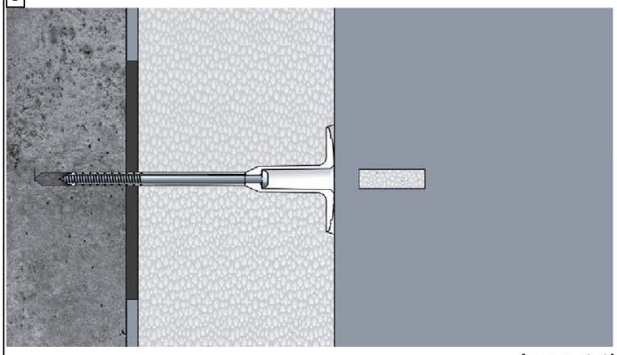


^ Surface fixed installation with STR-tool or standard bit

5



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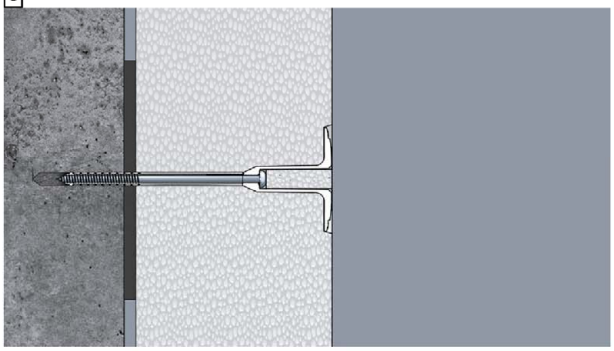

Insert the STR plug

ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U	Annex B 4
Intended use Installation instructions - surface fixed installation with STR plug	

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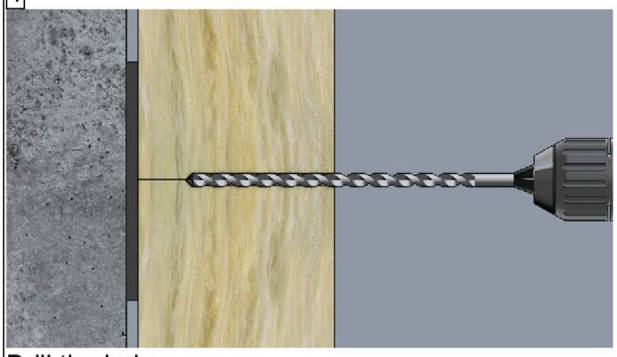
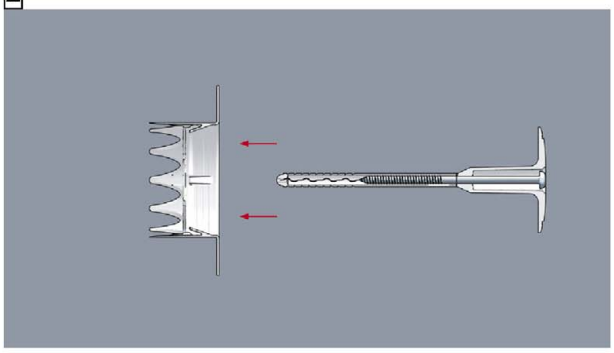
1



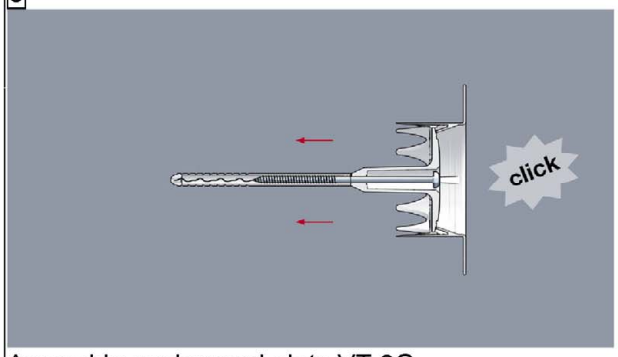
Drill the hole

2



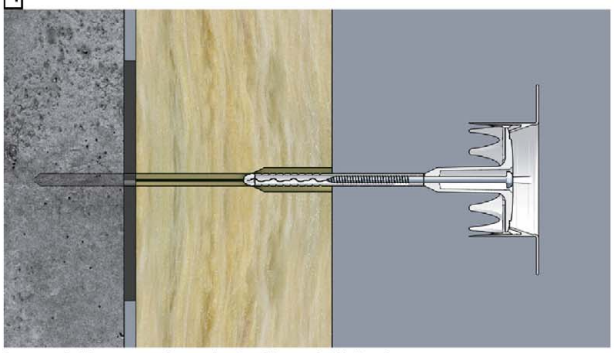
Assemble anchor and plate VT 2G

3



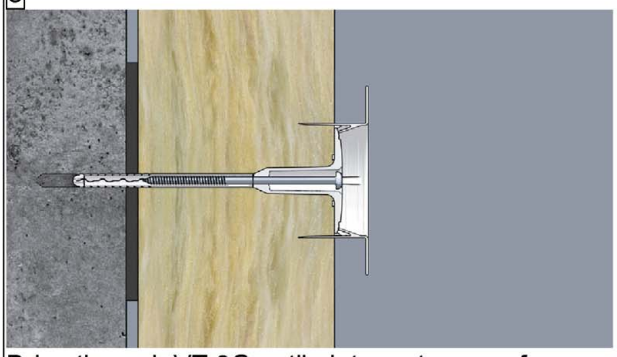
Assemble anchor and plate VT 2G

4



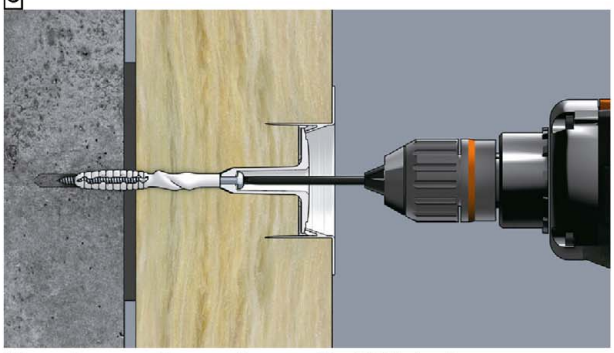
Insert the anchor into the drill hole

5



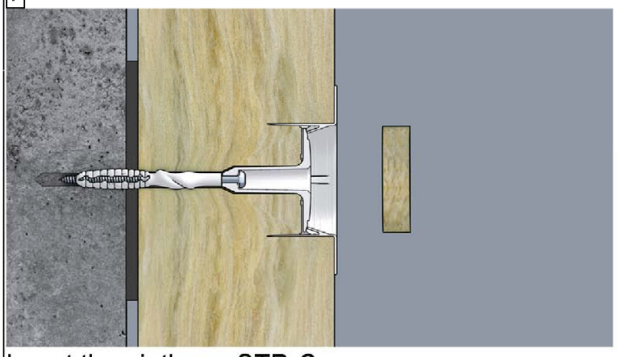
Drive through VT 2G until plate rests on surface

6



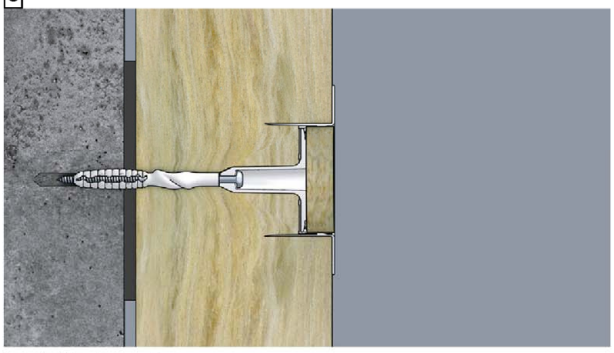
Mounting on the surface with STR tool

7



Insert the ejotherm STR-Cap

8



installed anchor

ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U	Annex B 5
Intended use Installation instructions - countersunk fixed installation with VT 2G plate and with STR insulation cover	

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

Anchor type ejotherm STR U / STR U 2G / SDK U

Base materials	Bulk density ρ [kg/dm³]	minimum compressive strength f_b [N/mm²]	General remarks	Drill method	N_{Rk} [kN]
Concrete C12/15 – C50/60 as per EN 206:2013+A1:2016			Compacted normal weight concrete without fibres thickness of the thin skin 100 mm > h ≥ 40 mm	hammer	1,5
concrete C16/20 – C50/60 as per EN 206:2013+A1:2016 thin concrete members (thin skin)				hammer	1,5
Clay bricks, Mz ap per EN 771-1:2011+A1:2015	≥ 1,8	12	Vertically perforation up to 15 %[4)]	hammer	1,5
Sand-lime solid bricks, KS as per EN 771-2:2011+A1:2015	≥ 1,8	12	Vertically perforation up to 15 %[4)]	hammer	1,5
Vertically perforated clay bricks, Hlz as per EN 771-1:2011+A1:2015	≥ 1,2	12	Vertically perforation >15 % and ≤ 50 % [4)]	rotary	1,2[1)]
Vertically perforated clay bricks, Hlz as per EN 771-1:2011+A1:2015	≥ 0,8	12	Vertically perforation >15 % and ≤ 50 % [4)]	rotary	1,1[1)]
				hammer	0,7[1)]
Lightweight concrete solid blocks, V as per EN 771-3:2011+A1:2015	≥ 0,9	4	Vertically perforation >15 % and ≤ 50 % [4)]	rotary	0,6
Sand-lime perforated bricks, KSL as per EN 771-2:2011+A1:2015	≥ 1,6	12	Vertically perforation >15 % and ≤ 50 % [4)]	rotary	1,5 [2)]
				hammer	1,5 [2)]
Lightweight concrete hollow blocks, Hbl, as per EN 771-3:2011+A1:2015	≥ 0,5	2	Vertically perforation >15 % and ≤ 50 % [4)]	rotary	0,6[3)]
Lightweight aggregate concrete LAC, as per EN 1520:2011 / EN 771-3: 2011+A1:2015	≥ 1,8	4	-	hammer	0,9
Autoclaved aerated concrete AAC as per EN 771-4:2011+A1:2015	≥ 0,4	2	-	rotary	0,75
Vertically perforated clay bricks Hlz 250x380x235 mm as per EN 771-1:2011+A1:2015			Outer web thickness ≥ 10,3 mm	rotary	0,75[1)]

1) The value applies only for outer web thickness ≥ 11 mm; otherwise the characteristic resistance shall be determined by job site pull-out tests.
2) The value applies only for outer web thickness ≥ 20 mm; otherwise the characteristic resistance shall be determined by job site pull-out tests.
3) The value applies only for outer web thickness ≥ 30 mm; otherwise the characteristic resistance shall be determined by job site pull-out tests.
4) Cross section reduced by perforation vertically to the resting area

ejotherm STR U, ejotherm STR U 2G and ejotherm SDK U	Annex C 1
Performance Characteristic tension resistance	

Table C2: Point thermal transmittance according EOTA Technical Report TR 025:2016-05		
anchor type	insulation thickness h_D [mm]	point thermal transmittance χ [W/K]
ejotherm STR U mounted on the surface with EPS anchor cap	60 – 420	0,002
ejotherm STR U mounted countersunk with insulation cover	80 – 420	0,002
ejotherm STR U 2G mounted on the surface with EPS anchor cap	60 – 400	0,002
ejotherm STR U 2G mounted countersunk with insulation cover	80 – 400	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]
ejotherm STR U ejotherm STR U 2G	60	2,08	0,60

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Table C4: Displacements					
Base material	Bulk density ρ [kg/dm³]	Minimum Compressive Strength f_b [N/mm²]	Tension Load N [kN]	Displacements STR U $\Delta\delta_N$ [mm]	Displacements STR U 2G $\Delta\delta_N$ [mm]
Concrete C16/20 – C50/60 (EN 206:2013+A1:2016)			0,5	0,7	0,8
concrete C16/20 – C50/60 (EN 206:2013+A1:2016) thin concrete members (thin skins)			0,5	0,7	0,8
Clay bricks, Mz (EN 771-1:2011+A1:2015)	≥ 1,8	12	0,5	0,7	0,8
Sand-lime solid bricks, KS (EN 771-2:2011+A1:2015)	≥ 1,8	12	0,5	0,7	0,8
Lightweight concrete solid blocks, V (EN 771-3:2011+A1:2015)	≥ 0,9	4	0,2	0,7	0,8
Vertically perforated clay bricks, Hlz (EN 771-1:2011+A1:2015)	≥ 1,2	12	0,4	0,7	0,8
Vertically perforated clay bricks, Hlz (EN 771-1:2011+A1:2015)	≥ 0,8	12	0,36	0,7	0,8[1)]
			0,23	0,9	0,9[2)]
Sand-lime perforated bricks, KSL (EN 771-2:2011+A1:2015)	≥ 1,6	12	0,5	0,7	0,8[1)]
			0,5	0,7	0,9[2)]
Lightweight concrete hollow blocks, Hbl (EN 771-3:2011+A1:2015)	≥ 0,5	2	0,2	0,7	0,8
Lightweight aggregate concrete, LAC (EN 1520:2011 / EN 771-3:2011 +A1:2015)	≥ 1,8	4	0,3	0,7	0,8
Autoclaved aerated concrete, AAC (EN 771-4:2011+A1:2015)	≥ 0,4	2	0,25	0,7	0,8
Vertically perforated clay bricks Hlz 250x380x235 mm (EN 771-1:2011+A1:2015)			0,25	0,7	0,8

1) drill hole by rotary drilling
2) drill hole by hammer drilling