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European Technical Assessment Body  
for construction products



## European Technical Assessment

ETA-04/0064  
of 31 October 2024

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

EJOT SDM-T plus, SDF-K plus and SDF-S plus

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  
GERMANY

Manufacturing plant

EJOT manufacturing plant 1, 2, 3, 4

This European Technical Assessment contains

19 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-04/0064 issued on 29 August 2014

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## Specific Part

### 1 Technical description of the product

The EJOT screwed-in anchor type SDM-T *plus* with a plate and the anchor types SDF-K *plus* and SDF-S *plus* with a collar consists of an anchor sleeve made of virgin polyamide with an enlarged shaft spreading zone subsequently and an accompanying specific screw of stainless steel or galvanised steel. The head of the screw of the anchor type SDM-T *plus* has an additional coating. The anchor type SDM-T *plus* may in addition be combined with the anchor plates SBL 140 *plus* and VT 90.

The anchor type SDF-K *plus* may in addition be combined with the anchor plates SBV-PØ8/90 and IT Z 60/8 K.

The anchor type SDF-S *plus* may in addition be combined with the anchor plates IT Z 60/8 S, TE Ø60/50 and TE Ø60/110.

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 <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 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+

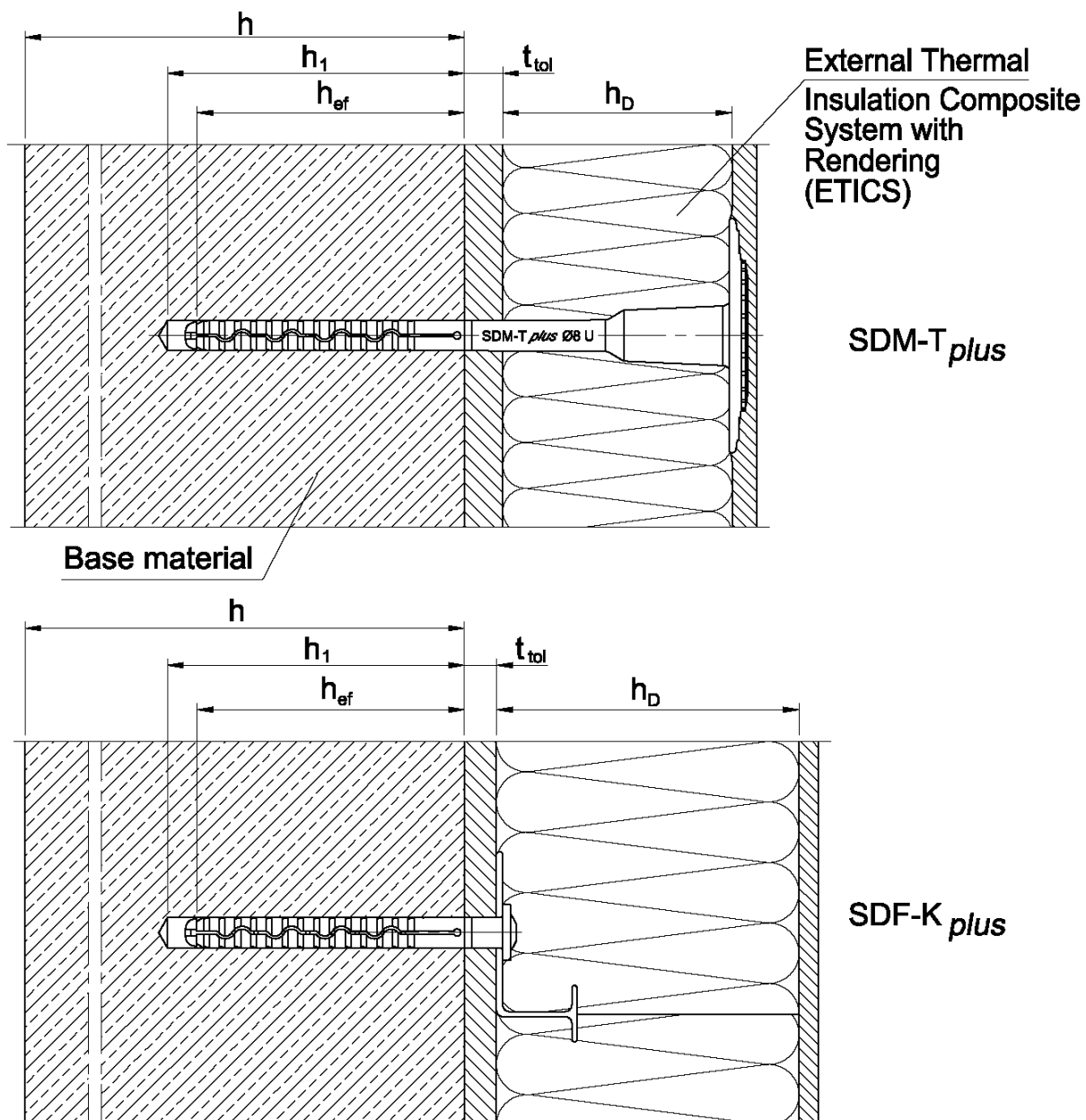
**5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable European Assessment Document**

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 31 October 2024 by Deutsches Institut für Bautechnik

Dipl.-Ing. Beatrix Wittstock  
Head of Section

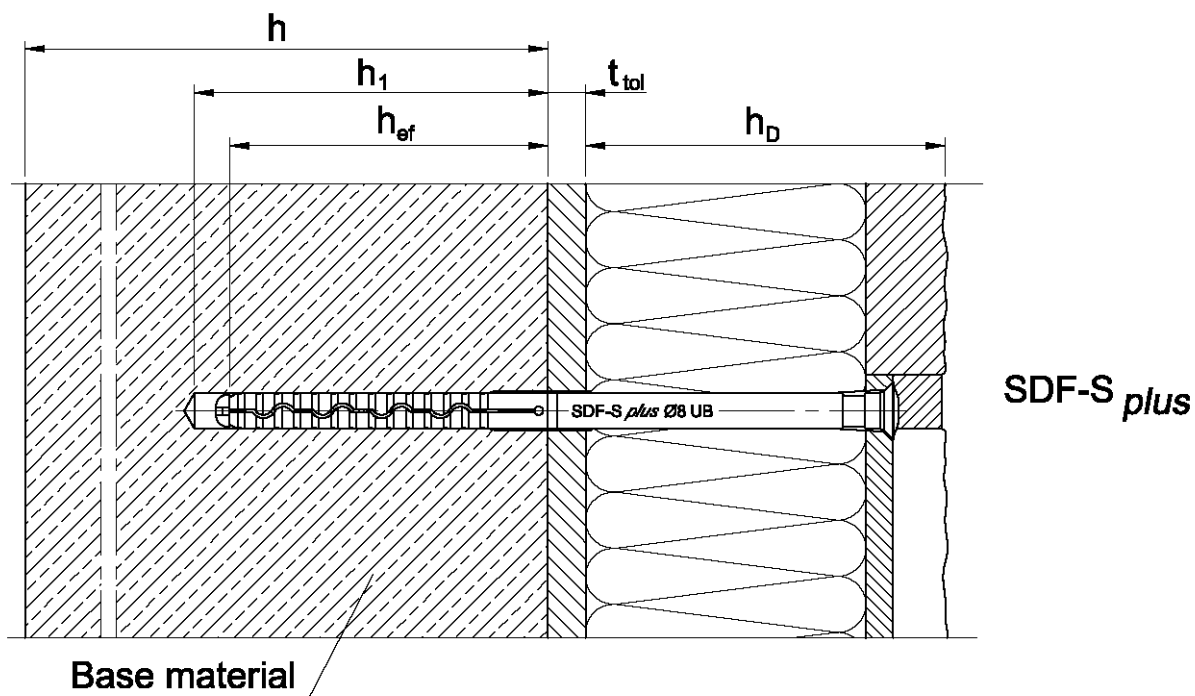
*beglaubigt:*  
Ziegler



EJOT SDM-T plus, SDF-K plus and SDF-S plus

**Product description**  
Installed condition

Annex A 1



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

EJOT SDM-T plus, SDF-K plus and SDF-S plus

**Product description**  
Installed condition

Annex A 2

English translation prepared by DIBt

<p><b>SDM-T plus</b></p>	
<p><b>SDM-T plus U</b></p> <p><b>SDM-T plus U</b></p>	<p><b>Marking:</b> Identifying mark (EJOT) Anchor type (e.g. SDM-T plus) Diameters of anchor (Ø8/60) Length of anchor (e.g. 160)</p> <p>Screw with an additional coating of the screw head</p>
<p><b>SDF-K plus</b></p>	<p><b>SDF-S plus</b></p>
<p><b>SDF-K plus U</b></p>	<p><b>SDF-S plus U</b></p>
<p><b>SDF-K plus UB</b></p>	<p><b>SDF-S plus UB</b></p>
	<p><b>Marking:</b> Identifying mark (EJOT) Anchor type name (e.g. SDF-K plus) Diameters of anchor (e.g. Ø8) Length of anchor (e.g. 80)</p>
<p>EJOT SDM-T plus, SDF-K plus and SDF-S plus</p>	
<p><b>Product description</b> Marking of the anchor sleeve and expansion element</p>	<p>Annex A 3</p>

**Table A1: Dimensions**

Anchor Type	Colour	Anchor sleeve				Accompanying specific screw		
		$d_{nom}$ [mm]	$h_{ef}$ [mm]	min $L_a$ [mm]	max $L_a$ [mm]	$d_s$ [mm]	$c_1$ [mm]	$c$ [mm]
SDM-T plus	nature	8	50	100	420	5,2	-	65
SDM-T plus U	green	8	70	120	420	5,2	-	65
SDF-K / -S plus <sup>1)</sup>	nature	8	50	60	220	5,5	-	65
SDF-K / -S plus U <sup>1)</sup>	green	8	70	80	220	5,5	-	65
SDF-K / -S plus UB	green	8	70	80	300	5,5	60	70

<sup>1)</sup> For this anchor type it is allowed to use the screw with  $c_1 = 60 / c = 70$ .

Determination of maximum thickness of insulation  $h_D$  for EJOT SDM-T plus  $\varnothing 8$ :

$$h_D = L_a - t_{tol} - h_{ef} \quad (L_a = \text{e.g. } 140; t_{tol} = 10)$$

e.g.  $h_D = 140 - 10 - 50$

$$h_{Dmax.} = 80$$

**Table A2: Materials**

Name	Materials
Anchor sleeve	virgin polyamide, colour: nature or green (see Table A1)
Specific screw	Steel, electrogalvanized $\geq 5 \mu\text{m}$ according to EN ISO 4042:2022
	stainless steel A2 (material number 1.4401 or 1.4571) or stainless steel A4 (material number 1.4301 or 1.4567) according to EN 10088-3:2014 or according to ISO 3506-01:2020
Slip-on plate (SBL 140 plus, VT 90, SBV-P, TE60)	virgin polyamide PA 6 or PA GF 50, colour: nature
Slip-on plate (ITZ 60)	virgin polyamide PA 6, colour: blue

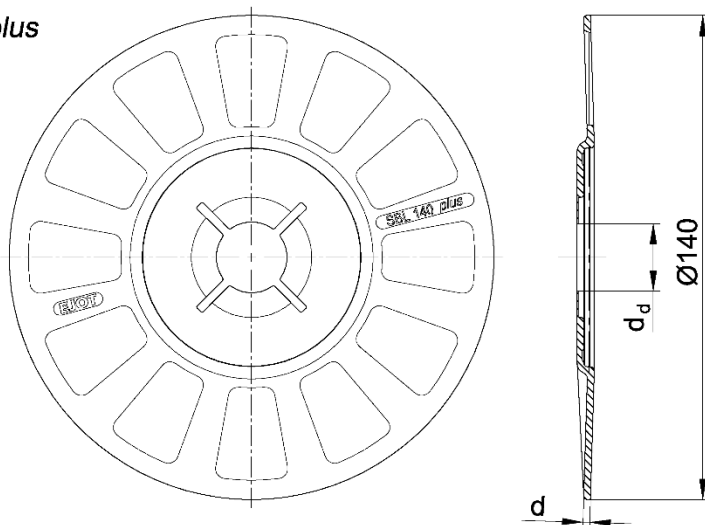
EJOT SDM-T plus, SDF-K plus and SDF-S plus

**Product description**  
Dimensions of the anchor sleeve and specific screw,  
Materials

Annex A 4

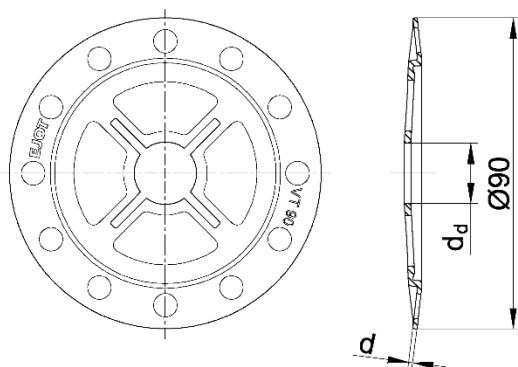


SBL 140 plus



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

VT 90



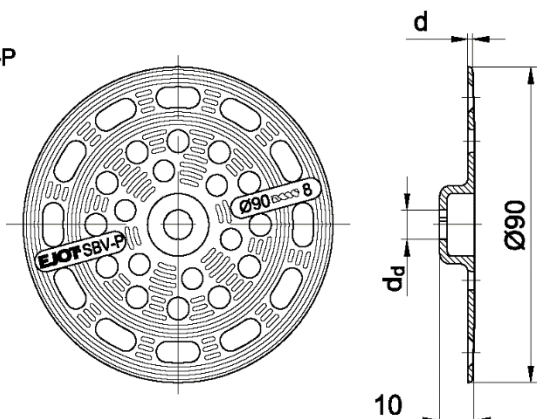
VT 90	
colour	nature
$d_d$ [mm]	17,5
$d$ [mm]	1,2

EJOT SDM-T plus, SDF-K plus and SDF-S plus

**Product description**  
Slip on plates combined with SDM-T plus and SDM-T plus U

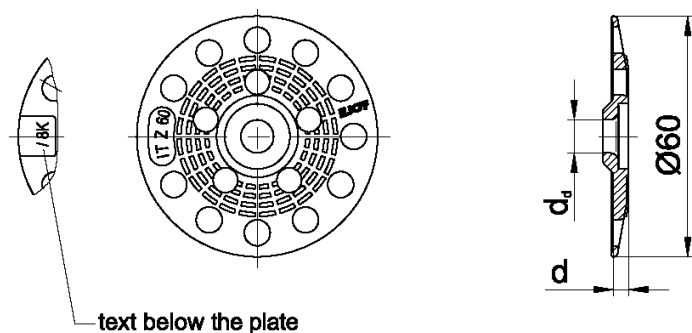
Annex A 5

SBV-P



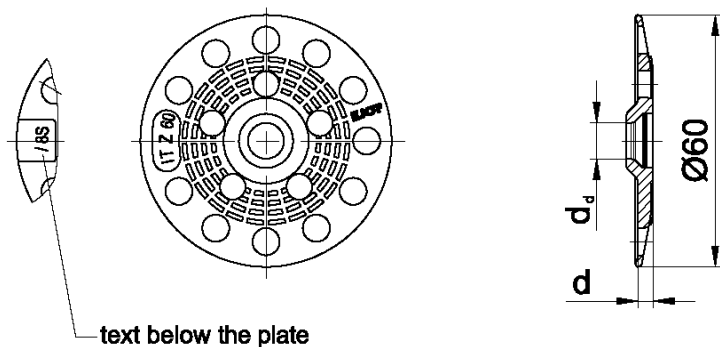
SBV-P Ø8/90	
colour	nature
$d_d$ [mm]	8,5
$d$ [mm]	1,4
Material	Polyamide

IT Z 60



IT Z 60/8 K	
colour	blue
$d_d$ [mm]	8,2
$d$ [mm]	3,7

IT Z 60



IT Z 60/8 S	
colour	blue
$d_d$ [mm]	8,2
$d$ [mm]	3,7

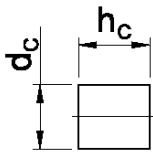
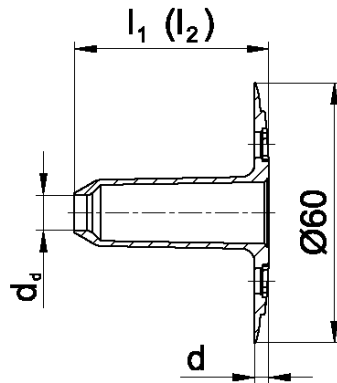
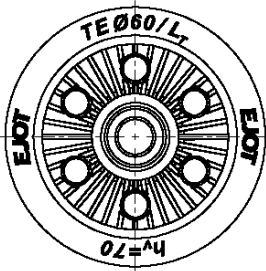
EJOT SDM-T plus, SDF-K plus and SDF-S plus

**Product description**

Slip on plates SBV-P and IT Z 60/8 K combined with SDF-K (*plus / plus U / plus UB*) and slip on plate IT Z 60/8 S combined with SDF-S (*plus / plus U / plus UB*)

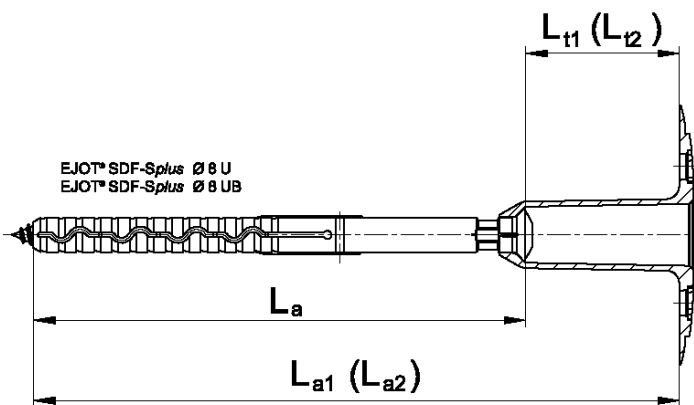
Annex A 6

TE 60



Plug (to close the plate)  
colour: white  
material: EPS 30

TE Ø60/l <sub>T</sub>		
colour	nature	
d <sub>d</sub>	[mm]	8,2
D	[mm]	3,3
L <sub>T min</sub>	[mm]	50
l <sub>1</sub>	[mm]	45
L <sub>T max</sub>	[mm]	110
l <sub>2</sub>	[mm]	105
d <sub>c</sub>	[mm]	15
h <sub>c</sub>	[mm]	16,5



L <sub>t1</sub>	[mm]	40
L <sub>t2</sub>	[mm]	100

Determining the combined length of anchor L<sub>a1</sub>:

$$L_{a1} = L_a + L_{t1} \quad (L_a = \text{e.g. } 140; L_{t1} = 40)$$

e.g.  $L_{a1} = 140 + 40$   
 $L_{a1} = 180$

Determining the combined length of anchor L<sub>a2</sub>:

$$L_{a2} = L_a + L_{t2} \quad (L_a = \text{e.g. } 220; L_{t2} = 100)$$

e.g.  $L_{a2} = 220 + 100$   
 $L_{a1} = 320$

EJOT SDM-T plus, SDF-K plus and SDF-S plus

**Product description**  
Plate TE 60 combined with SDF-S plus U und SDF-S plus UB

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:

- 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.
- Autoclaved aerated concrete (base material group E), according to Annex C 1.
- For other base materials of the base material group A, B, C or E the characteristic resistance of the anchor may be determined by job site tests according to EOTA Technical Report TR 51, 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 and vetures.

### 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  $\leq 6$  weeks

EJOT SDM-T plus, SDF-K plus and SDF-S plus

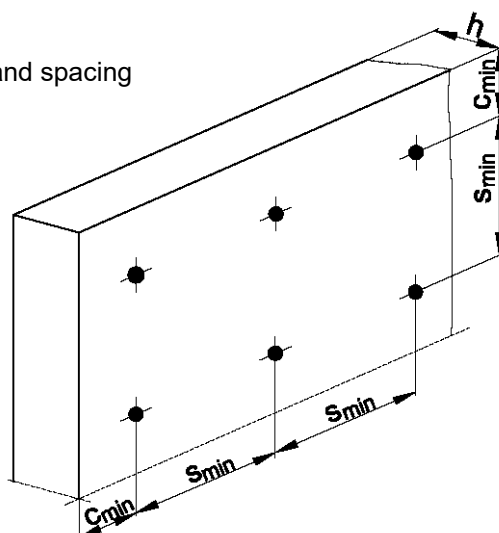
**Intended use**  
Specifications

Annex B 1

Table B1: Installation parameters			
Anchor type		SDM-T plus SDF-K plus SDF-S plus	SDM-T plus U SDF-K plus U SDF-S plus U SDF-K plus UB SDF-S plus UB
Drill hole diameter	$d_0$ [mm]	8	8
Cutting diameter of drill bit	$d_{cut}$ [mm] ≤	8,45	8,45
Depth of drilled hole to deepest point	$h_1$ [mm] ≥	60	80
Effective anchorage depth	$h_{ef}$ [mm] ≥	50	70

Table B2: Anchor distances and dimensions of members			
Anchor type		SDM-T plus SDF-K plus SDF-S plus	SDM-T plus U SDF-K plus U SDF-S plus U SDF-K plus UB SDF-S plus UB
Minimum spacing	$s_{min}$ [mm] =	100	100
Minimum edge distance	$c_{min}$ [mm] =	100	100
Minimum thickness of member	$h$ [mm] ≥	100	100

Scheme of distances and spacing

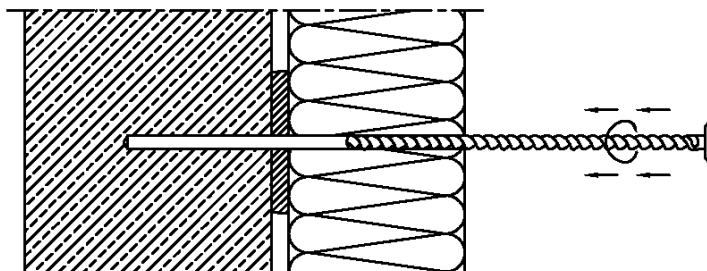


EJOT SDM-T plus, SDF-K plus and SDF-S plus

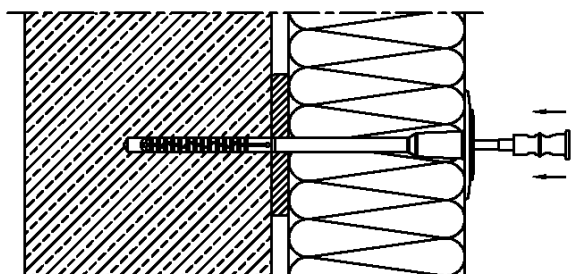
**Intended use**  
Installation parameters,  
Anchor distances and dimensions of members

Annex B 2

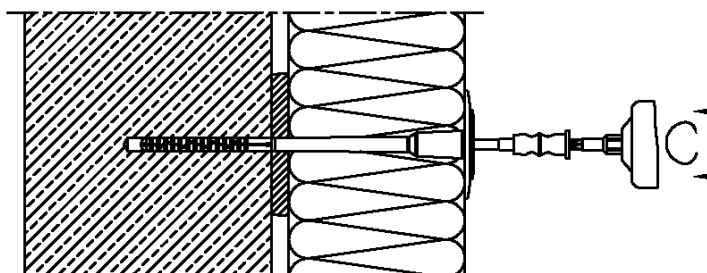
**Installation instructions EJOT SDM-T plus**



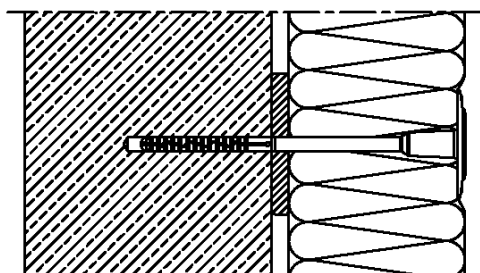
Drill the hole perpendicular to the substrate surface. Clean the drill hole 3x.



Place the anchor into the drill hole.  
The bottom side of the plate must be flush with the ETICS.



Surface fixed installation with a standard bit.



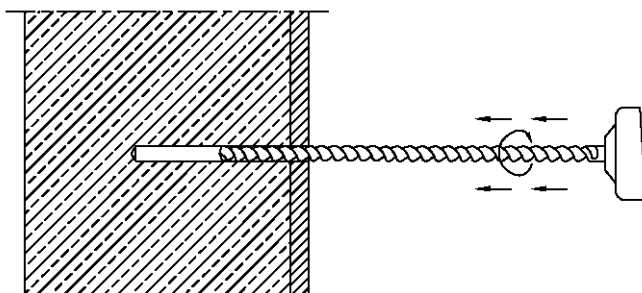
Installed condition of EJOT SDM-T plus.

EJOT SDM-T plus, SDF-K plus and SDF-S plus

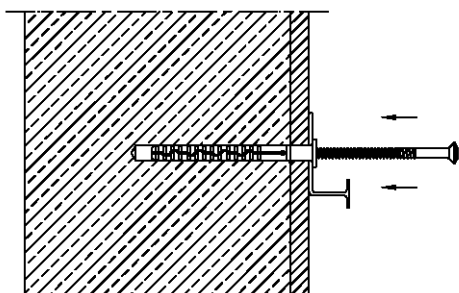
**Intended use**  
Installation instructions

Annex B 3

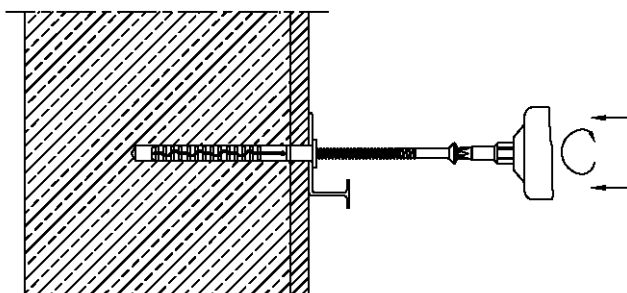
### Installation instructions EJOT SDF-K plus



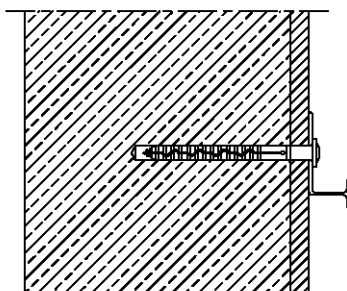
Drill the hole perpendicular to the substrate surface. Clean the drill hole 3x.



Place the anchor into the drill hole.  
The bottom side of the anchor plate must be flush with the rail.



Install the screw into the anchor.



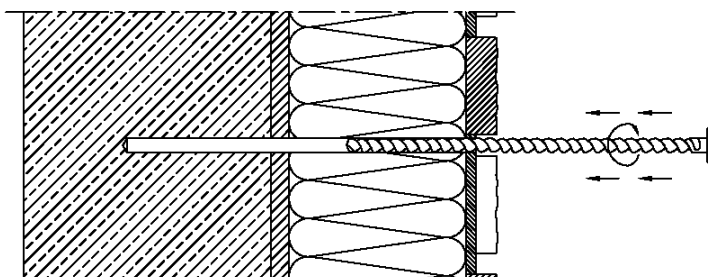
Installed condition of EJOT SDF-K plus.

EJOT SDM-T plus, SDF-K plus and SDF-S plus

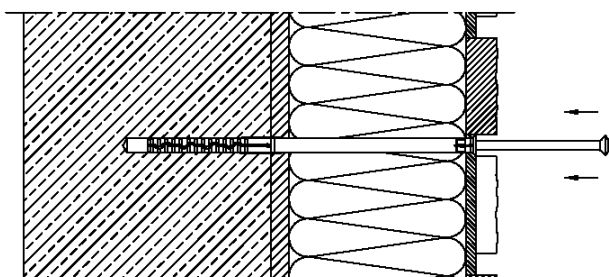
**Intended use**  
Installation instructions

Annex B 4

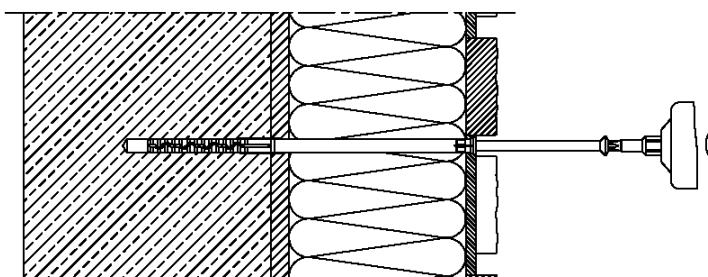
### Installation instructions EJOT SDF-S plus



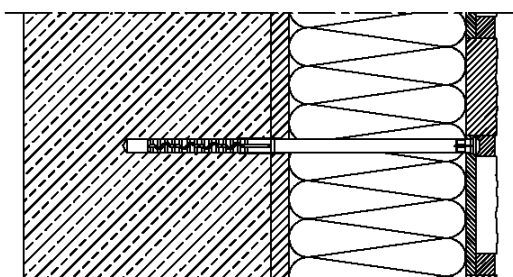
Drill the hole perpendicular to the substrate surface. Clean the drill hole 3x.



Place the anchor into the drill hole.



Install the anchor.



Installed condition of EJOT SDF-S plus.

EJOT SDM-T plus, SDF-K plus and SDF-S plus

**Intended use**  
Installation instructions

Annex B 5



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

Anchor type					SDM-T plus SDF-K plus SDF-S plus	SDM-T plus U SDF-K plus U SDF-S plus U SDF-K plus UB SDF-S plus UB
Base materials	Bulk density $\rho$ [kg/dm <sup>3</sup> ]	minimum compressive strength $f_b$ [N/mm <sup>2</sup> ]	General remarks	Drill method <sup>1)</sup>		$N_{Rk}$ [kN]
Concrete C12/15–C50/60 as per EN 206:2013+A1:2016			Compacted normal weight concrete without fibres	H	1,5	1,5
Clay bricks Mz as per EN 771-1:2011+A1:2015	≥ 1,8	12	Vertically perforation up to 15 % <sup>5)</sup>	H	1,5	1,5
Sand-lime solid bricks KS as per EN 771-2:2011+A1:2015	≥ 1,8	12	Vertically perforation up to 15 % <sup>5)</sup>	H	1,5	1,5
Lightweight concrete solid blocks V as per EN 771-3:2011+A1:2015	≥ 0,5	4	Proportion of hole up to 10%, maximum extension of hole: length = 110mm; width = 45mm	D	0,9	0,9
Vertically perforated clay bricks HLz as per EN 771-1:2011+A1:2015	≥ 0,9	12	Vertically perforation >15 % and ≤ 50 % <sup>5)</sup>	D	-	1,2 <sup>2)</sup>
Sand-lime perforated bricks KSL as per EN 771-2:2011+A1:2015	≥ 1,6	12	Vertically perforation >15 % and ≤ 50 % <sup>5)</sup>	D	-	1,5 <sup>3)</sup>
Lightweight concrete hollow blocks Hbl as per EN 771-3:2011+A1:2015	≥ 0,5	2	Vertically perforation >15 % and ≤ 50 % <sup>5)</sup>	D	-	0,75 <sup>4)</sup>
Autoclaved aerated concrete AAC as per EN 771-4:2011+A1:2015	≥ 0,5	4	-	D	-	0,6

1) H = hammer drilling / D = rotary drilling

2) The value applies only for outer web thickness ≥ 12 mm; otherwise the characteristic resistance shall be determined by job site pull-out tests.

3) The value applies only for outer web thickness ≥ 20 mm; otherwise the characteristic resistance shall be determined by job site pull-out tests.

4) The value applies only for outer web thickness ≥ 30 mm; otherwise the characteristic resistance shall be determined by job site pull-out tests.

5) Cross section reduced by perforation vertically to the resting area

EJOT SDM-T plus, SDF-K plus and SDF-S plus

**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]
SDM-T <i>plus</i> U	60 - 80	0,002
	> 80 - 360	0,003

Anchor type	insulation thickness $h_D$ [mm]	point thermal transmittance $\chi_{B,C}$ [W/K]
SDF-S <i>plus</i> with TE $\varnothing 60/50$	60 - 180	0,002
SDF-S <i>plus</i> with TE $\varnothing 60/110$	120 - 150	0,000
	150 - 240	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]
SDM-T <i>plus</i> U	60	2,67	0,6
SDF-S <i>plus</i> with TE $\varnothing 60/50$	60	2,24	0,7
SDF-S <i>plus</i> with TE $\varnothing 60/110$	60	2,24	0,7

EJOT SDM-T plus, SDF-K plus and SDF-S plus

**Performances**  
Point thermal transmittance  
Plate stiffness

Annex C 2

**Table C4: Displacements**

Base material	Bulk density $\rho$ [kg/dm <sup>3</sup> ]	Minimum compressive strength $f_b$ [N/mm <sup>2</sup> ]	Tension load <b>N</b> [kN]	displacements $\Delta\delta_N$ [mm]
Concrete C12/15 – C50/60 (EN 206:2013+A1:2016)			0,5	0,7
Clay bricks, Mz (EN 771-1:2011+A1:2015)	≥ 1,8	12	0,5	0,5
Sand-lime solid bricks, KS (EN 771-2:2011+A1:2015)	≥ 1,8	12	0,5	0,5
Lightweight concrete solid blocks, V (EN 771-3:2011+A1:2015)	≥ 0,5	4	0,3	0,6
Vertically perforated clay bricks, HLz (EN 771-1:2011+A1:2015)	≥ 0,9	12	0,4	0,3
Sand-lime perforated bricks, KSL (EN 771-2:2011+A1:2015)	≥ 1,6	12	0,5	0,3
Lightweight concrete hollow blocks, Hbl (EN 771-3:2011+A1:2015)	≥ 0,5	2	0,25	0,2
Autoclaved aerated concrete AAC 4 (EN 771-4:2011+A1:2015)	≥ 0,5	4	0,2	<0,1

EJOT SDM-T plus, SDF-K plus and SDF-S plus

**Performances**  
Displacements

Annex C 3