

DECLARAȚIA DE PERFORMANȚĂ

DoP 0180

pentru fischer FIF-SV II (Element de fixare din plastic pentru fixarea sistemelor compozite de izolare termică exterioară cu tencuială)

RO

1. Cod unic de identificare al produsului-tip:

DoP 0180

2. Utilizare (utilizări) preconizată (preconizate):

**Ancoră din plastic înșurubată pentru fixarea sistemelor compozite de izolare termică exterioară
Consultați suplimentul, în special anexele B1- B3
fischerwerke GmbH & Co. KG, Klaus-Fischer-Str. 1, 72178 Waldachtal, Germany**

3. Fabricant:

4. Reprezentant autorizat:

—

5. Sistemul (sistemele) de evaluare și de verificare a constantei performanței:

2+

6. Documentul de evaluare european:

EAD 330196-01-0604 (Version July 2017)

Evaluarea tehnică europeană:

ETA-20/0029; 2020-01-17

Organismul de evaluare tehnică:

DIBt- Deutsches Institut für Bautechnik

Organism (organisme) notificat(e):

1343 MPA Darmstadt / 2873 TU Darmstadt

7. Performanța (performanțe) declarată (declarată):

Siguranță în utilizare (BWR 4)

Capacitate portantă caracteristică:

Rezistența caracteristică la întindere:

Anexele C1

Distanța minimă față de margini:

Anexele B2

Distanța minimă între ancore:

Anexele B2

Deplasări:

Sarcina de întindere cu factor de siguranță parțial:

Anexele B1, C2

Deplasări:

Anexele C2

Rigiditatea rozetei:

Diametrul rozetei:

NPD

Capacitatea portantă a rozetei:

NPD

Rigiditatea rozetei:

NPD

Economie de energie și retenție de căldură (BWR 6)

Conductivitatea termică:

Conductivitatea termică punctuală a unei ancore:

Anexele C2

Grosimea stratului de termoizolație:

Anexele C2



8. Documentație tehnică adecvată și/sau documentație tehnică specifică: –

Performanța produsului identificat mai sus este în conformitate cu setul de performanțe declarate. Această declarație de performanță este eliberată în conformitate cu Regulamentul (UE) nr. 305/2011, pe răspunderea exclusivă a fabricantului identificat mai sus.

Semnată pentru și în numele fabricantului de către:

Thilo Pregartner, Dr.-Ing.
Tumlingen, 2020-01-29

Peter Schillinger, Dipl.-Ing.

Această declarație de performanță a fost întocmită în mai multe limbi. În cazul unei divergențe de interpretare, versiunea în limba engleză prevalează întotdeauna.

Suplimentul include informații voluntare și complementare în limba engleză, în afara cerințelor legale (specificate neutru din punct de vedere al limbii).

Specific part

1 Technical description of the product

The screwed-in anchor fischer FIF-SV II consist of an anchor sleeve and a screw plate in different colours, both made of polyamide (virgin material) and an accompanying specific screw of galvanised steel.

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 verification 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 tension resistance	See Annex C1
Edge distances and spacing	See Annex B2
Displacements	See Annex C2

3.2 Energy economy and heat retention (BWR 6)

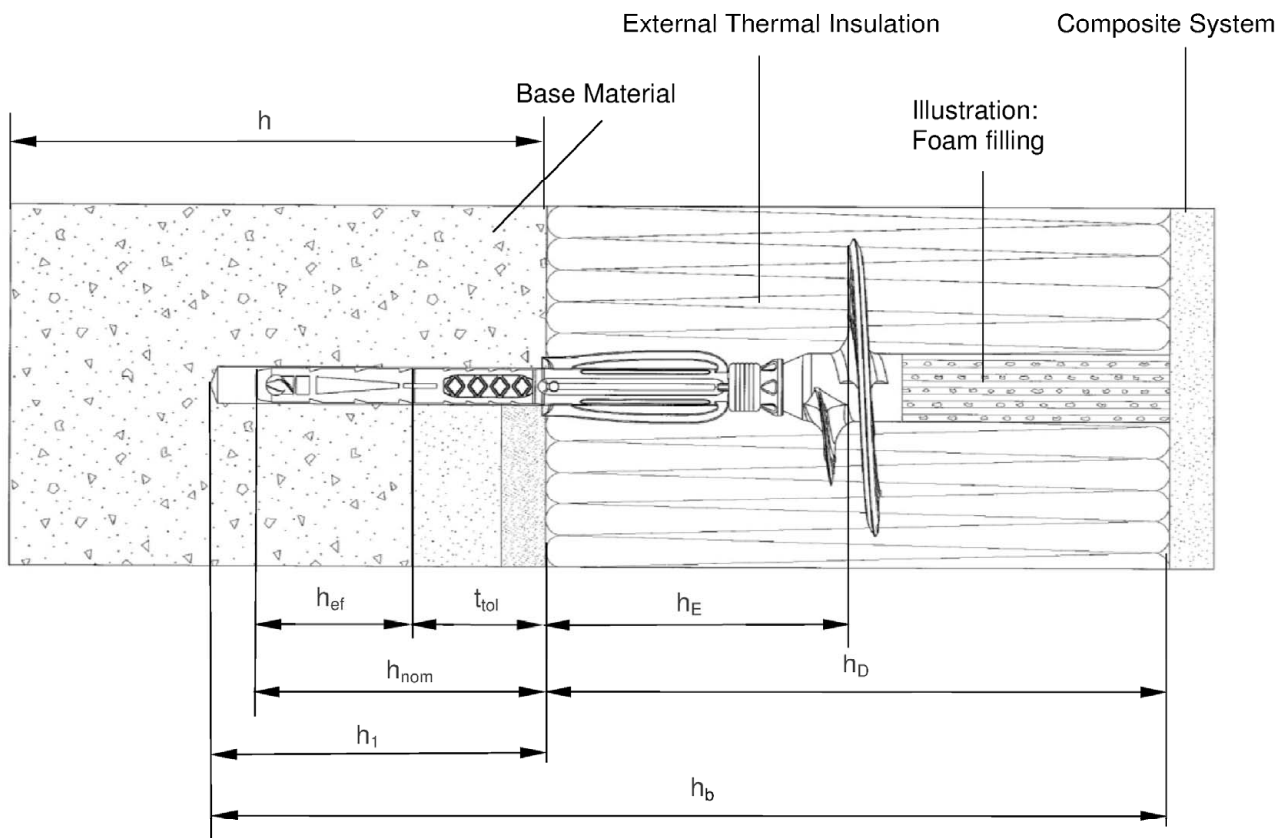
Essential characteristic	Performance
Point thermal transmittance	See Annex C2

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+

Installed anchor : FIF-SV II



Intended use

- Fixing of external thermal insulation composite systems (ETICS) in concrete and masonry
- Fixing of external thermal insulation composite systems (ETICS) in autoclaved aerated concrete and lightweight aggregated concrete

Legend

- h_{nom} = Overall plastic anchor embedment depth in the base material with non-load bearing coating (t_{tol})
- h_1 = Depth of drilled hole to deepest point in the base material
- h = Thickness of base material (wall)
- h_D = Thickness of insulation material
- t_{tol} = Thickness of equalizing layer and / or non-load bearing coating
- h_E = Embedment depth
- h_b = Total bore hole depth
- h_{ef} = Effective anchor embedment depth in the base material

Figures not to scale.

fischer FIF-SV II

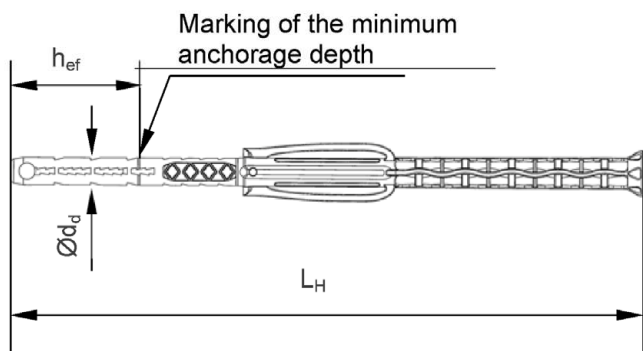
Product description
Installed anchor

Annex A1

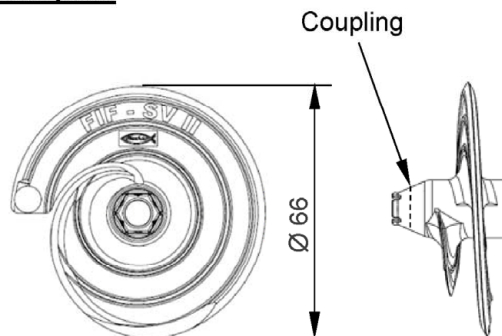
Appendix 2/ 9

Parts: FIF-SV II

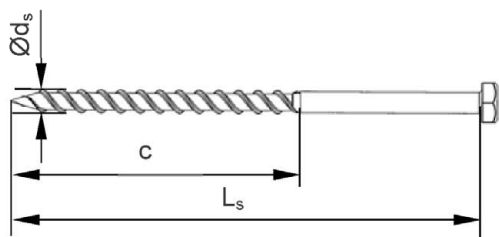
Anchor sleeve



Screw plate

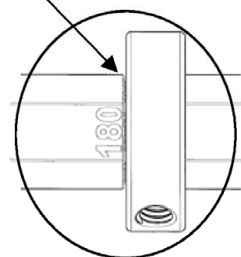
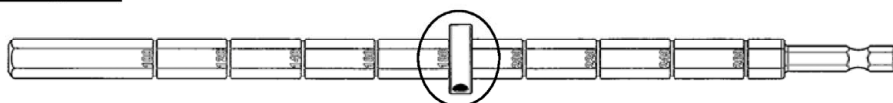


Special screw

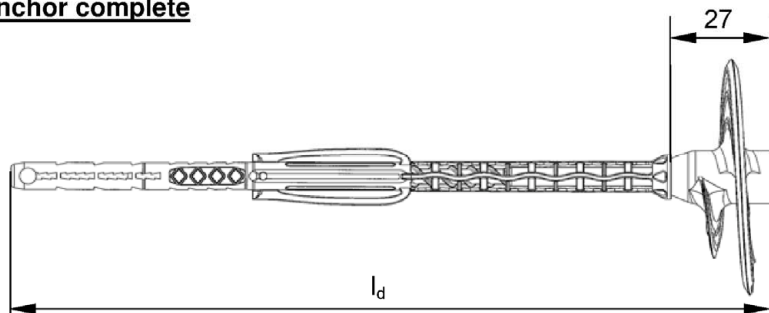


Adjustment of the ring depends of the insulation material thickness, e.g. $h_D = 180$ mm
→ adjust value 180 at the setting tool

Setting tool



Anchor complete



Figures not to scale.

fischer FIF-SV II

Product description
Anchor type and parts

Annex A2

Appendix 3/ 9

Table A3.1: Dimensions

Anchor type	Anchor sleeve					Special screw		
FIF-SV II	Ø d _d	h _{ef} ¹⁾	h _E ¹⁾	l _d	L _H	Ø d _s	L _s	c
	[mm]							
t _{tol} 0-10 mm	8	35	70	162	135	6	100	74
t _{tol} 0-30 mm				202	175		120	
t _{tol} 30-60 mm				232	205		150	

¹⁾ see Annex A1

Table A3.2: Marking on the plate

	Marking
Anchor type	FIF-SV II
Works symbol	 or 
Example	fischer (optional) FIF-SV II  or  CE (optional);  Ø 8 (optional); ABCDE (optional) XXXXXX= various additional markings allowed

Table A3.3: Marking on the anchor sleeve

	Marking
FIF-SV II t _{tol} 0-10 mm	t _{tol} 0-10
FIF-SV II t _{tol} 0-30 mm	t _{tol} 0-30
FIF-SV II t _{tol} 30-60 mm	t _{tol} 30-60

Table A3.4: Material

Designation	Material
Anchor sleeve	PA6 (virgin material), colour: grey
Screw plate	PA6 (virgin material) GF, colour: grey, yellow, red, orange, green, blue
Special screw	Steel; gal Zn A2G or A2F according to EN ISO 4042:2018

fischer FIF-SV II

Product description

Anchor types, marking on the anchor plate/sleeve, dimensions and material

Annex A3

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 external thermal insulation composite system (ETICS).

Base materials:

- Normal weight concrete (use category A), according to Annex C1
- Solid masonry (use category B), according to Annex C1
- Hollow or perforated masonry (use category C), according to Annex C1
- Lightweight aggregate concrete (use category D), according to Annex C1
- Autoclaved aerated concrete (use category E), according to Annex C1
- For other base materials of the use categories A, B, C, D and E the characteristic resistance of the anchor may be determined by job site tests acc. to EOTA Technical Report TR 051 Edition December 2016.

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 $\gamma_F = 1,5$ in absence of other national regulations.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be anchored. The position of the anchors is indicated on the design drawings.
- Fasteners are only to be used for multiple fixings of ETICS.

Installation:

- Drillmethod according to Annex C1
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters on 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

Table B2.1: Installation parameters

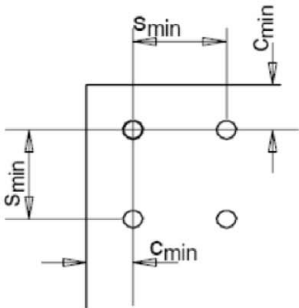
				FIF-SV II
Drill hole diameter	d_0	=	[mm]	8
Cutting diameter of drill bit	d_{cut}	≤		8,45
Depth of drill hole to deepest point	h_1	≥		55/75/105
Total bore hole depth at FIF-SV II t_{tol} 0-10 mm				$h_D + 55$
Total bore hole depth at FIF-SV II t_{tol} 0-30 mm	h_b	≥		$h_D + 75$
Total bore hole depth at FIF-SV II t_{tol} 30-60 mm				$h_D + 105$
Overall plastic anchor embedment depth in the base material (see Annex A1) at FIF-SV II t_{tol} 0-10 mm				45
Overall plastic anchor embedment depth in the base material (see Annex A1) at FIF-SV II t_{tol} 0-30 mm	h_{nom}	=		65
Overall plastic anchor embedment depth in the base material (see Annex A1) at FIF-SV II t_{tol} 30-60 mm				95

Table B2.2: Minimum distances and dimensions

				FIF-SV II
Minimum thickness of member	h_{min}	=	[mm]	100 ¹⁾
Minimum allowable spacing	s_{min}			100
Minimum allowable edge distance	c_{min}			100

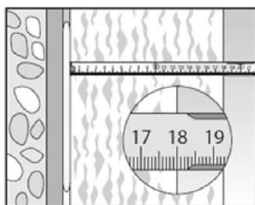
¹⁾ For weather resistant external wall panels: h_{min} =40 mm

Scheme of distances and spacing

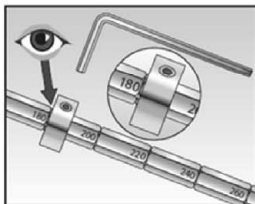


fischer FIF-SV II	Annex B2 Appendix 6/ 9
Intended use	
Installation parameters Minimum thickness of member, distances and spacing	

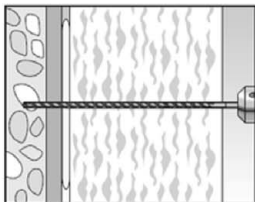
Installation instructions



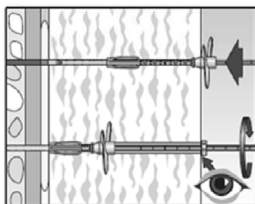
1. Measure insulation thickness h_D
(example: 18 cm = 180 mm).



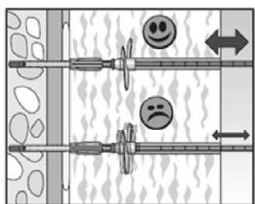
2. Adjust the setting tool ring corresponding to the insulation material thickness h_D in mm.
Number is legible.
Additionally to the setting tool ring a thin plastic plate (maximum 1 mm thickness) can be used as a stop unit for easier mounting.



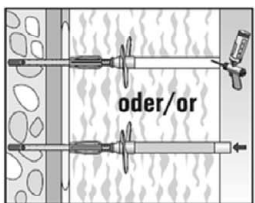
3. Drill bore hole.
Total drill hole depth must be at
 t_{tol} 0-10 mm $\rightarrow h_D + 55$ mm
 t_{tol} 0-30 mm $\rightarrow h_D + 75$ mm
 t_{tol} 30-60 mm $\rightarrow h_D + 105$ mm.
Note: Hlz, AAC only with rotary drilling



4. Press the anchor with the screw plate tight against the surface of the insulation material, then start screwing-in the anchor.
Setting is finished when the surface of the ring is flush with the surface of the insulation material.

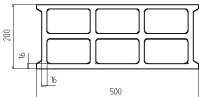


5. When step 4 is completed, press the adjustment tool tight against the installed anchor.
If there is no axial movement of the anchor, remove the setting tool.
In case of axial movement, a new anchor has to be set in a new drill hole.



5. The hole in the insulation material must be filled with a suitable foam (illustrated in Annex A1) or must be closed with an appropriate insulation cylinder.

Table C1.1: Characteristic resistance N_{RK}

Base material	Use cat. 1)	Bulk density ρ [kg/dm ³]	Minimum compressive strength f_b [N/mm ²]	Remarks	Drill method 2)	Characteristic resistance N_{RK} [kN]
Weather resistant skin of external wall panels, concrete C20/25 – C50/60	-	-	-	Thickness of concrete panels $40 \text{ mm} \leq h < 100 \text{ mm}$	H	0,9
Weather resistant skin of external wall panels, concrete C20/25 – C50/60	-	-	-	Thickness of concrete panels $40 \text{ mm} \leq h < 100 \text{ mm}$	R	1,5
Concrete C12/15- C 50/60 acc. to EN 206-1:2000	A	-	-	-	H	1,5
Sand-lime solid bricks, KS acc. to EN 771-2:2011	B	$\geq 2,0$	20	Cross section reduced up to 15% by perforation vertically to the resting area	H	1,5
			12			1,2
Clay bricks, Mz acc. to EN 771-1:2011	B	$\geq 1,8$	12	Cross section reduced up to 15% by perforation vertically to the resting area	H	1,2
Solid concrete block, Vbn acc. to EN 771-3:2011	B	$\geq 2,0$	20	Cross section reduced up to 10% by perforation vertically to the resting area	H	1,5
			12			1,2
Lightweight concrete solid blocks, Vbl acc. to EN 771-3:2011	B	$\geq 1,4$	8	Cross section reduced up to 15% by perforation vertically to the resting area, exterior web thickness $\geq 35 \text{ mm}$	H	0,6
Vertically perforated sand-lime bricks, KSL acc. to EN 771-2:2011	C	$\geq 1,4$	20	Cross section reduced more than 15% by perforation vertically to the resting area, Exterior web thickness $\geq 23 \text{ mm}$	H	1,2
			12			0,75
Vertically perforated clay bricks, Hlz acc. to EN 771-1:2011	C	$\geq 1,0$	12	Cross section reduced more than 15% and less than 50% by perforation vertically to the resting area, Exterior web thickness $\geq 12 \text{ mm}$	R	0,75
Lightweight concrete hollow blocks, Hbl acc. to EN 771-3:2011	C	$\geq 1,2$	10	Cross section reduced between 15% and 50% by perforation vertically to the resting area. Exterior web thickness $\geq 38 \text{ mm}$	H	1,2
			8			0,9
			6			0,75
			4			0,6
Lightweight concrete hollow blocks, Hbl4 acc. to EN 771-3:2011	C	$\geq 0,9$	4		H	0,5
Lightweight aggregate concrete, LAC acc. to EN 1520:2011 / EN 771-3:2011	D	$\geq 0,9$	6	-	H	0,75
Autoclaved aerated concrete blocks, AAC acc. to EN 771-4:2011	E	$\geq 0,5$	4	-	R	0,4

1) See Annex B1

2) R = Rotary drilling | H = Hammer drilling

Figures not to scale.

fischer FIF-SV II

Performance
Characteristic resistance

Annex C1

Appendix 8/ 9

Table C2.1: Point thermal transmittance acc. to EOTA Technical TR 025 : 2007 – 06

Anchor type	Thickness of insulation material h_D [mm]	Point thermal transmittance χ [W/K]
fischer FIF-SV II EPS-plug and air void $t_{tol} = 0 - 10$ mm	100 - 240	0,001
	> 240	0
fischer FIF-SV II PU-foam filled hole $t_{tol} = 0 - 10$ mm	100 - 150	0,001
	> 150	0
fischer FIF-SV II EPS-plug and air void $t_{tol} = 0 - 30$ mm	100 - 240	0,001
	> 240	0
fischer FIF-SV II PU-foam filled hole $t_{tol} = 0 - 30$ mm	100 - 150	0,001
	> 150	0
fischer FIF-SV II EPS-plug and air void $t_{tol} = 30 - 60$ mm	100	0,002
	120 - 240	0,001
	> 240	0
fischer FIF-SV II PU-foam filled hole $t_{tol} = 30 - 60$ mm	100	0,002
	120 - 150	0,001
	> 150	0

Table C2.2: Displacements

Base material	Minimum compressive strength f_b [N/mm ²]	Tension load N [kN]	Displacements $\delta m(N)$ [mm]
Concrete thin members 100 mm > h $\geq$ 40 mm $\geq$ C20/25 acc. to EN 206-1 (hammer drilling)	-	0,3	< 0,3
Concrete thin members 100 mm > h $\geq$ 40 mm $\geq$ C20/25 acc. to EN 206-1 (rotary drilling)	-	0,5	< 0,3
Concrete C16/20 - C50/60 acc. to EN 206-1 : 2000	-	0,5	< 0,3
Sand-lime solid bricks, KS acc.to EN 771-2 : 2011	20	0,5	< 0,3
	12	0,4	
Clay bricks, Mz acc. to EN 771-1:2011	12	0,4	< 0,3
Solid concrete block, Vbn acc. to EN 771-3:2011	20	0,5	< 0,3
	12	0,4	
Lightweight concrete solid blocks, Vbl acc. to EN 771-3:2011	8	0,2	< 0,2
Vertically perforated sand-lime bricks, KSL acc. to EN 771-2:2011	20	0,4	< 0,2
	12	0,25	
Vertically perforated clay bricks, Hlz acc. to EN 771-1:2011	12	0,25	< 0,3
Lightweight concrete hollow blocks, Hbl acc. to EN 771-3:2011	10	0,4	< 0,3
	8	0,3	
	6	0,25	
	4	0,2	
Lightweight concrete hollow blocks, Hbl4 acc. to EN 771-3:2011	4	0,15	< 0,4
Lightweight aggregate concrete, LAC acc. to EN 1520 :2011 / EN 771-3:2011	6	0,25	< 0,2
Autoclaved aerated concrete blocks, AAC acc. to EN 771-4:2011	4	0,15	< 0,1

fischer FIF-SV II**Performance**

Point thermal transmittance, displacements

Annex C2

Appendix 9/ 9