



## LEISTUNGSERKLÄRUNG



DoP: 0144

für FIF-PN (Kunststoffdübel für die Verwendung in Beton und Mauerwerk) – DE

1. Eindeutiger Kenncode des Produkttyps: **DoP: 0144**
2. Verwendungszweck(e): **Für die Verwendung in Wärmedämmverbundsystemen (WDVS) mit Putzschicht zur Weiterleitung von Windsoglasten, siehe Anhang, insbesondere Anhänge B 1 bis B 3**
3. Hersteller: **fischerwerke GmbH & Co. KG, Klaus-Fischer-Straße 1, 72178 Waldachtal, Deutschland**
4. Bevollmächtigter: --
5. System(e) zur Bewertung und Überprüfung der Leistungsbeständigkeit: **2+**
6. Europäisches Bewertungsdokument: **EAD 330196-01-0604**

Europäische Technische Bewertung: **ETA-18/0253; 2018-05-29**

Technische Bewertungsstelle: **DIBt**

Notifizierte Stelle(n): **1343 – MPA Darmstadt**

7. Erklärte Leistung(en):

### **Sicherheit und Barrierefreiheit bei der Nutzung (BWR 4)**

- **Charakteristische Zugtragfähigkeit: Siehe Anhang, insbesondere Anhang C 1**
- **Rand- und Achsabstände: Siehe Anhang, insbesondere Anhang B 2**
- **Tellersteifigkeit: Siehe Anhang, insbesondere Anhang C 1**
- **Verschiebungen: Siehe Anhang, insbesondere Anhang C 1**

### **Energieeinsparung und Wärmeschutz (BWR 6)**

- **Punktbezogener Wärmedurchgangskoeffizient: Siehe Anhang, insbesondere Anhang C 1**

8. Angemessene Technische Dokumentation und/oder Spezifische Technische Dokumentation: ---

Die Leistung des vorstehenden Produkts entspricht der erklärten Leistung/den erklärten Leistungen. Für die Erstellung der Leistungserklärung im Einklang mit der Verordnung (EU) Nr. 305/2011 ist allein der obengenannte Hersteller verantwortlich.

Unterzeichnet für den Hersteller und im Namen des Herstellers von:

Andreas Bucher, Dipl.-Ing.

Wolfgang Hengesbach, Dipl.-Ing., Dipl.-Wirtsch.-Ing.

Tumlingen, 2018-06-05

- Diese Leistungserklärung wurde in verschiedenen Sprachversionen erstellt. Für den Fall unterschiedlicher Auslegung hat immer die englische Version Vorrang.
- Der Anhang enthält freiwillige und ergänzende Informationen in englischer Sprache. Diese gehen über die (sprachneutral angegebenen) gesetzlichen Anforderungen hinaus.

**Specific Part****1 Technical description of the product**

The fischer FIF - PN consists of a plastic sleeve made of polypropylene (virgin material), a plate and an accompanying specific nail made of glass fibre reinforced polyamide (virgin material).

The anchor may in addition be combined with the slip-on-plate DT 90, DT 110 and DT 140.

The product description is given in Annex A.

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

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

The 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)**

<b>Essential characteristic</b>	<b>Performance</b>
Characteristic tension resistance	See Annex C 1
Edge distances and spacing	See Annex B 2
Plate stiffness	See Annex C 1
Displacements	See Annex C 1

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

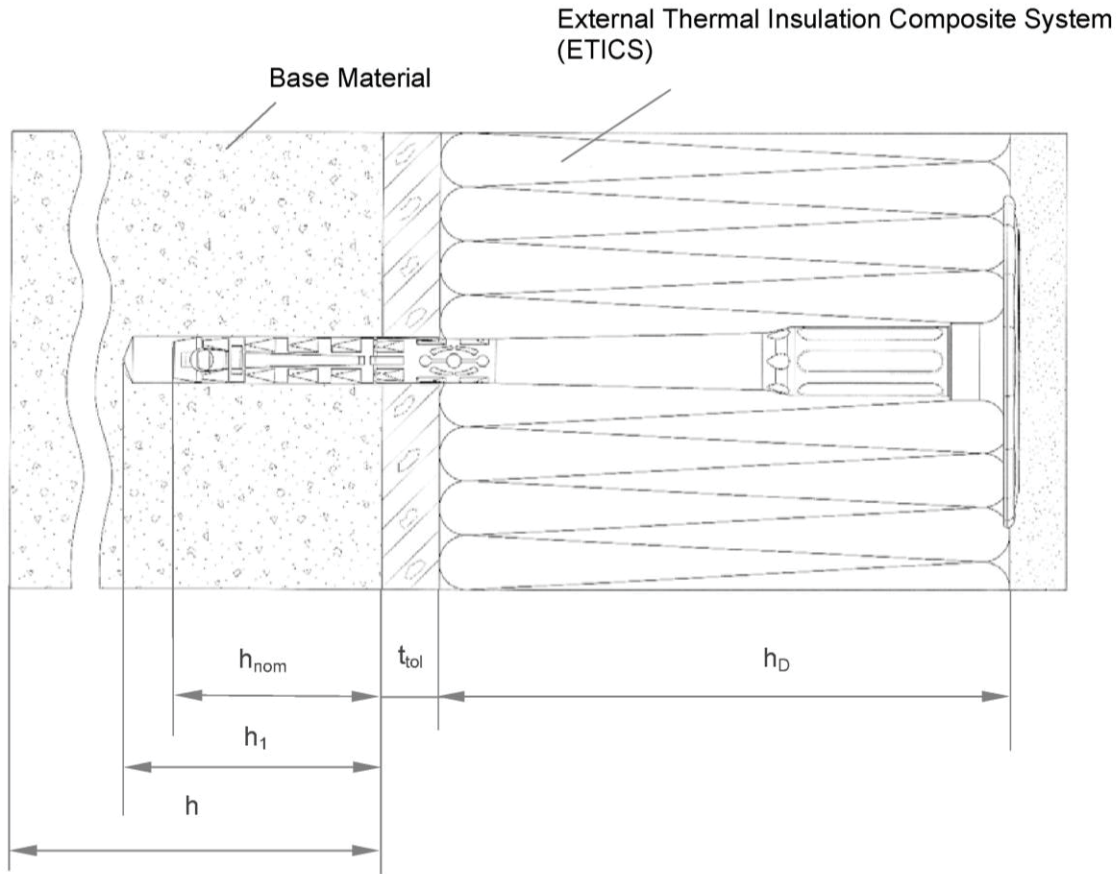
<b>Essential characteristic</b>	<b>Performance</b>
Point thermal transmittance	See Annex C 1

**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-PN**



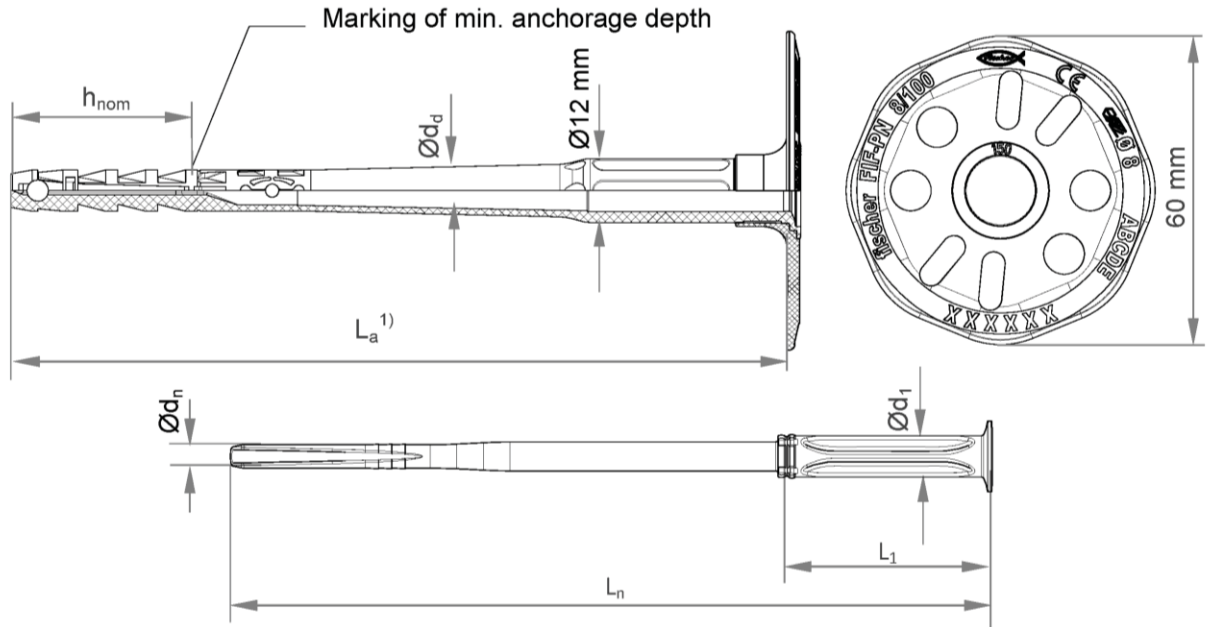
**Legend**

- $h_{nom}$  = Overall plastic anchor embedment depth in the base material
- $h_1$  = Depth of drilled hole to deepest point
- $h$  = Thickness of member (wall)
- $h_D$  = Thickness of insulation material
- $t_{tol}$  = Thickness of equalizing layer or non-load bearing coating

Figures not to scale

fischer FIF-PN	<b>Annex A 1</b>
<b>Product description</b> Installed anchor	

**Single parts : FIF-PN**



1) Various length of the anchors are possible:  
 $L_a = L_n$  (length of accompanying specific nail) + 5 mm






Determination of maximum thickness of insulation:  $h_D = L_a - h_{nom} - t_{tol}$

e.g. FIF-PN 8x150:

$L_a = 148$  mm,  $h_{nom} = 35$  mm,  $t_{tol} = 10$  mm

$h_D = 148 - 35 - 10 \approx 100$  mm

**Table A2.1: Marking**

Anchor Type	FIF-PN
Anchor plate diameter	Ø 60 mm
Works symbol	 or  or blank
Size of anchor	Ø 8 mm
Length of anchor	$L_a$
Example	fischer (optional) FIF-PN  or  or blank CE (optional)  Ø 8 (optional) ABCDE (optional) XXXXX= additional marking possible

Figures not to scale

fischer FIF-PN	<b>Annex A 2</b>
<b>Product description</b> Anchor type and Marking	

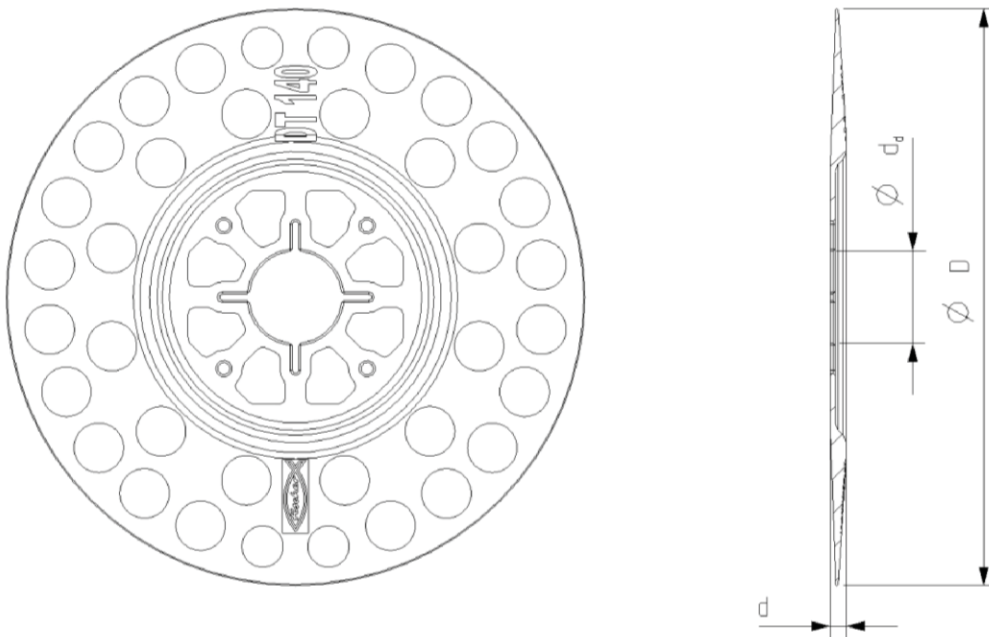
**Table A3.1: Dimensions**

Anchor Type	Anchor Sleeve				Accompanying specific nail		
	$\varnothing d_d$	$h_{nom}$	$L_{a,min}$	$L_{a,max}$	$\varnothing d_n$	$L_1$	$\varnothing d_1$
	[mm]						
FIF-PN	8	35	110	230	4,4	40	8

**Table A3.2: Materials**

Designation	Material
Anchor sleeve	PP (virgin material), colour: grey
Anchor plate	PA6 (virgin material) GF; colour: grey
Special nail	PA6 GF (virgin material), colour: nature

**Drawing of the slip-on plate**



**Table A3.3: Slip-on plate, diameters and material**

Slip-on plate	$\varnothing D$	$\varnothing d_d$	$d$	Material
	[mm]			
DT 90 / 110 / 140	90 / 110 / 140	22,5	3,9	PA6 GF

Figures not to scale

fischer FIF-PN	<b>Annex A 3</b>
<b>Product description</b> Dimensions, Material, Slip-on plate combined with FIF-PN	

### 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 or E, 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  $\gamma_F = 1,5$ , 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 anchors is indicated on the design drawings.
- Fasteners are only to be used for multiple fixings of ETICS.

**Installation:**

- Drill method 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  $\leq 6$  weeks.

fischer FIF-PN	<b>Annex B 1</b>
<b>Intended use</b> Specification	

**Table B2.1: Installation parameters**

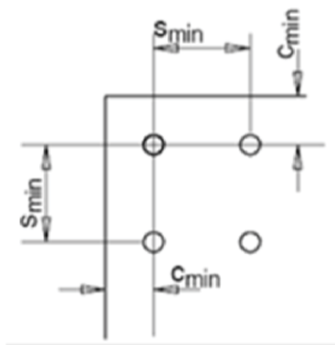
Anchor type		FIF-PN
Drill hole diameter	$d_0 =$	8
Cutting diameter of drill bit	$d_{cut} \leq$	8,45
Depth of drill hole to deepest point	$h_1 \geq$	45 / 65 <sup>1)</sup>
Overall plastic anchor embedment depth in the base material	$h_{nom} \geq$	35 / 55 <sup>1)</sup>

<sup>1)</sup> only for use cat. "D" and "E"

**Table B2.2: Minimum thickness, distance and spacing**

Anchor type		FIF-PN
Minimum thickness of member	$h_{min}$	100
Minimum spacing	$s_{min} =$	100
Minimum edge distance	$c_{min}$	100

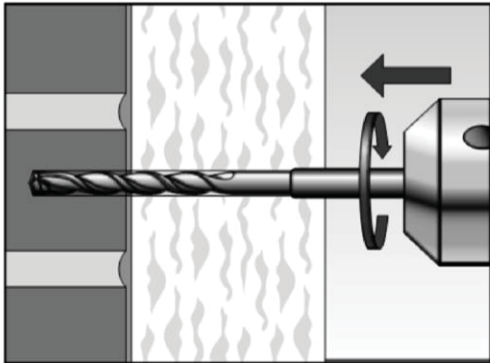
**Scheme of distance and spacing**



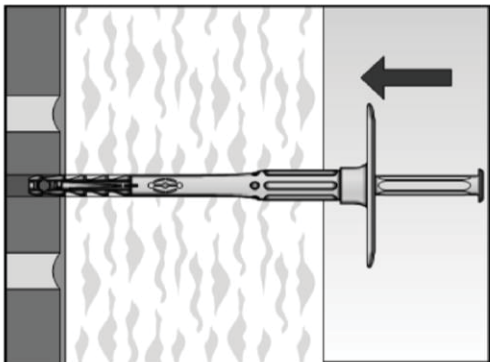
Figures not to scale

fischer FIF-PN	<b>Annex B 2</b>
<b>Intended use</b> Installation parameters, minimum thickness, distances and spacings	

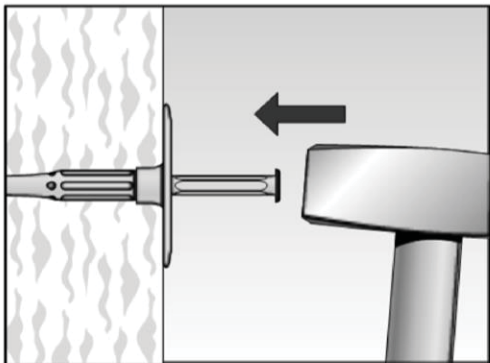
**Installation instructions:**



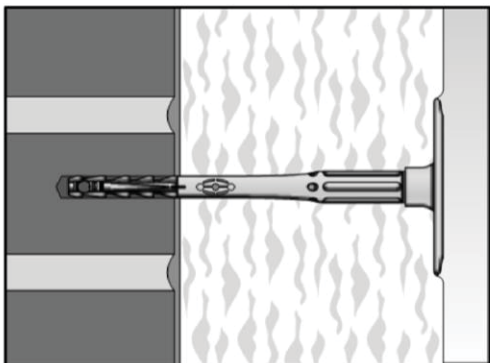
1. Drill the bore hole by the parameters acc. to Table B2.1 and the corresponding drilling method acc. to Annex C1.



2. Insert anchor manually.



3. Set anchor by hammer blows.



4. Correctly installed anchor.

Figures not to scale

fischer FIF-PN

**Intended use**  
Installation instruction

**Annex B 3**



<b>Table C1.1: Characteristic tension resistance <math>N_{Rk}</math> for a single anchor</b>						
Base material	Use cat.	Bulk density $\rho$ [kg/dm <sup>3</sup> ]	Min. comp-ressive strength $f_b$ [N/mm <sup>2</sup> ]	Remarks	Drill <sup>1)</sup> method	Characteristic resistance $N_{Rk}$ [kN]
Normal weight concrete $\geq$ <b>C12/15 – C50/60</b> acc. to EN 206:2013	A				H	<b>0,5</b>
Clay bricks <b>Mz</b> , acc. to EN 771-1:2011	B	$\geq 2,0$	12	Cross section reduced up to 15% by perforation vertically to the resting area	H	<b>0,5</b>
Vertically perforated clay bricks e.g. acc. to EN 771-1:2011, <b>H1z</b>	C	$\geq 1,0$	12	Cross section between 15% and 50% by perforation vertically to the resting area. Exterior web thickness $\geq 12$ mm	R	<b>0,4</b>
Lightweight Aggregate Concrete $\geq$ <b>LAC</b> acc. to EN 1520:2011	D	$\geq 0,8$	6	Minimum thickness of brick or exterior web $t \geq 50$ mm	H	<b>0,3</b>
Autoclaved aerated concrete blocks, e.g. <b>AAC</b> acc. to EN 771-4 $h_{nom} = 35$ mm	E	$\geq 0,50$	4	DIN V 4165-100	R	<b>0,3</b>
<sup>1)</sup> H = Hammer drilling R = Rotary drilling						
<b>Table C1.2: Point thermal transmittance acc. to EOTA Technical Report TR 025: 2016-05</b>						
Anchor type	Thickness of insulation material $h_D$ [mm]		Point thermal transmittance $\chi$ [W/K]			
FIF-PN	60 - 180		0,000			
<b>Table C1.3: Plate stiffness acc. to EOTA Technical Report TR 026: 2016-05</b>						
Anchor type	Diameter of the anchor plate [mm]	Load resistance of the anchor plate [kN]		Plate stiffness [kN/mm]		
FIF-PN	60	1,63		0,63		
<b>Table C1.4: Displacements of the FIF-PN</b>						
Base material				Tension load F [kN]	Displacement $s$ $\delta$ [mm]	
Concrete C12/15 – C50/60 (EN 206-1:2000)				0,15	< 0,2	
Clay bricks, <b>Mz 12</b> (EN 771-1:2011)				0,15	< 0,2	
Vertically perforated Clay brick, <b>H1z 12</b> (EN 771-1:2011)				0,13	< 0,4	
Lightweight Aggregate Concrete $\geq$ <b>LAC 6</b> DIN EN 1520				0,10	< 0,2	
Autoclaved aerated concrete blocks, <b>AAC 4</b> (EN 771-4) $h_{nom} = 35$ mm				0,10	< 0,2	
fischer FIF-PN					<b>Annex C 1</b>	
<b>Performance</b> Characteristic tension resistance, point thermal transmittance, plate stiffness, displacements						