

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

**ETA-10/0460**  
**of 21 June 2018**

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

fischer termoz LO 8

Product family  
to which the construction product belongs

Nailed-in plastic anchor for fixing of external thermal  
insulation composite systems with rendering in concrete  
and masonry

Manufacturer

fischerwerke GmbH & Co. KG  
Klaus-Fischer-Straße 1  
72178 Waldachtal  
DEUTSCHLAND

Manufacturing plant

fischerwerke

This European Technical Assessment  
contains

11 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

**European Technical Assessment  
ETA-10/0460**

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## Specific Part

### 1 Technical description of the product

The fischer nailed-in anchor termoz LO 8 consists of a plastic sleeve made of virgin polypropylene, 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 plates DT 90, DT 110 and DT 140.

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 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 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)

Essential characteristic	Performance
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+

English translation prepared by DIBt

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

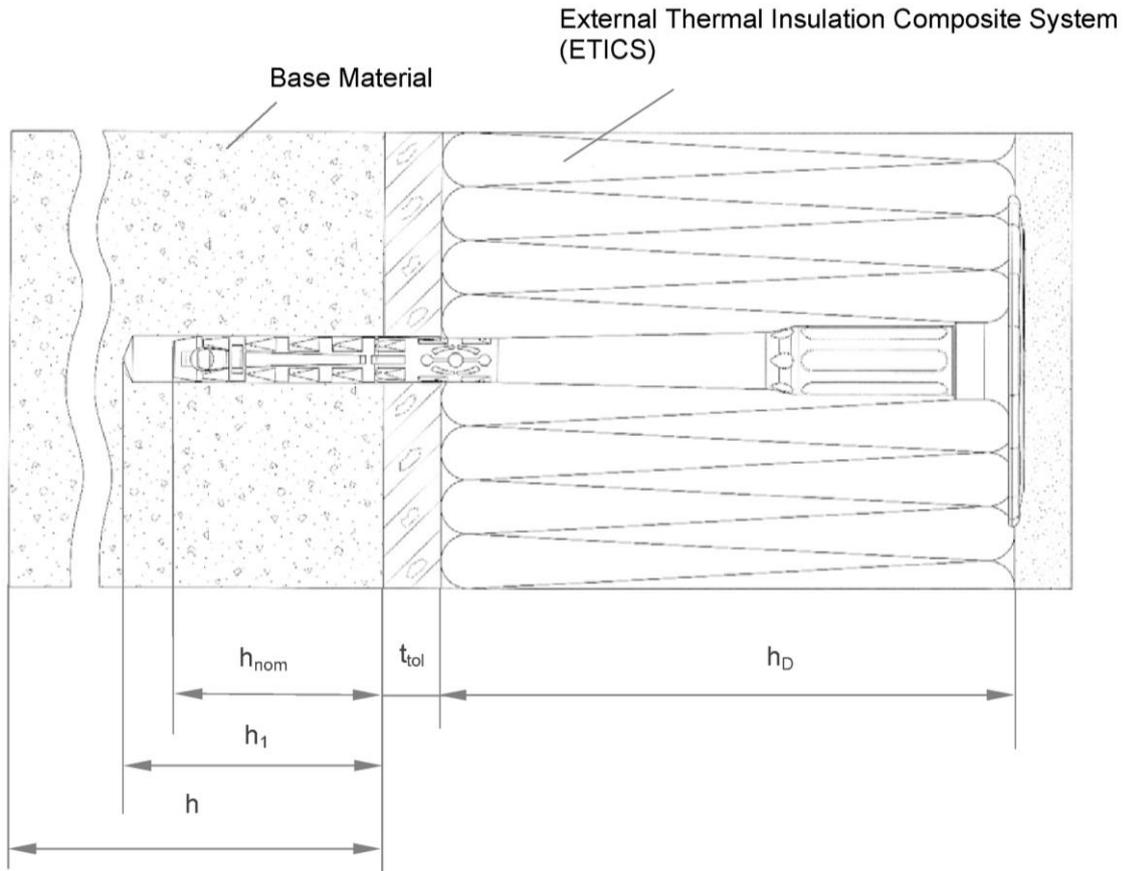
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 21 June 2018 by Deutsches Institut für Bautechnik

Dr.-Ing. Lars Eckfeldt  
p. p. Head of Department

*beglaubigt:*  
Ziegler

**Installed anchor: termoz LO 8**



**Legend**

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

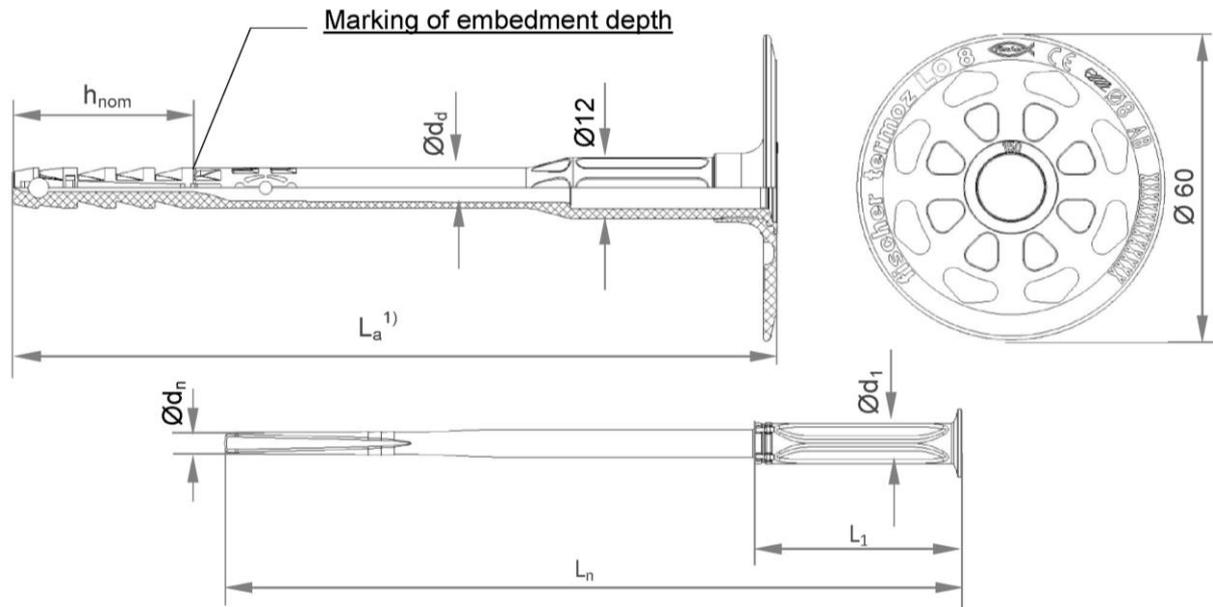
Figures not to scale

fischer termoz LO 8

**Product description**  
Installed anchor

**Annex A 1**

**Single parts : termoz LO 8**



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

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

e.g. termoz LO 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	termoz LO 8
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) termoz LO 8  or  or blank CE (optional)  (optional) AB (optional) XXXXX= additional marking possible

Figures not to scale

fischer termoz LO 8

**Product description**  
Anchor type and Marking

**Annex A 2**

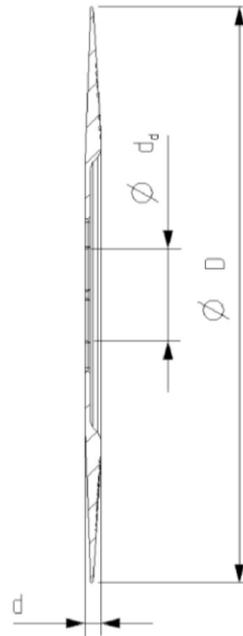
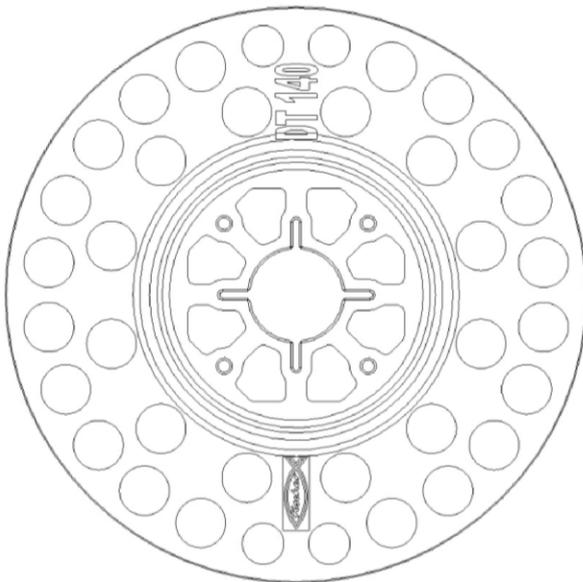
**Table A3.1: Dimensions**

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]						
termoz LO 8	8	35	110	230	4,4	40	8

**Table A3.2: Materials**

Designation	Material
Anchor sleeve	PP (virgin material), colour: grey
Anchor plate	PA6, GF 30 or PA6, GF 35, Colour: grey, orange, red, green, yellow, blue
Special nail	PA6, GF (virgin material), colour: nature

**slip-on plate combined with termoz LO 8**



**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 termoz LO 8

**Product description**  
Dimensions, Material, Slip-on plate combined with termoz LO 8

**Annex A 3**

## 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 C 1.
- Solid masonry (use category B), according to Annex C 1.
- For other base materials of the use categories A or B, 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:

- Drillmethod according to Annex C 1.
- 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 termoz LO 8

**Intended use**  
Specification

**Annex B 1**

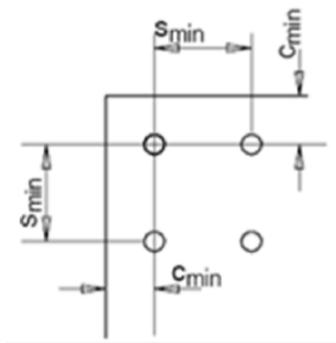
**Table B2.1: Installation parameters**

Anchor type		termoz LO 8
Drill hole diameter	$d_0 =$	8
Cutting diameter of drill bit	$d_{cut} \leq$	8,45
Depth of drilled hole to deepest point	$h_1 \geq$	45
Overall plastic anchor embedment depth in the base material	$h_{nom} \geq$	35

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

Anchor type		termoz LO 8
Minimum thickness of member	$h_{min}$	100
Minimum spacing	$s_{min} =$	100
Minimum edge distance	$c_{min}$	100

**Scheme of distance and spacing**



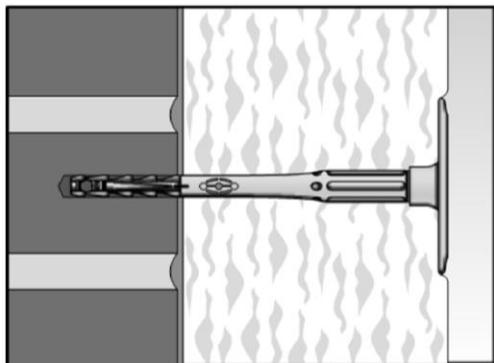
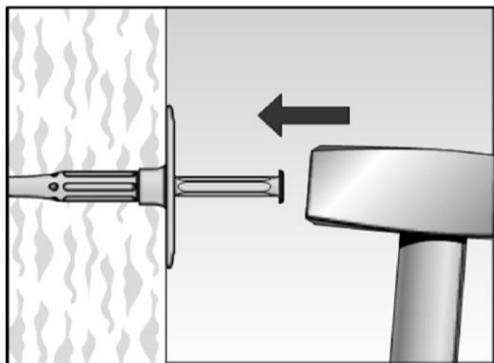
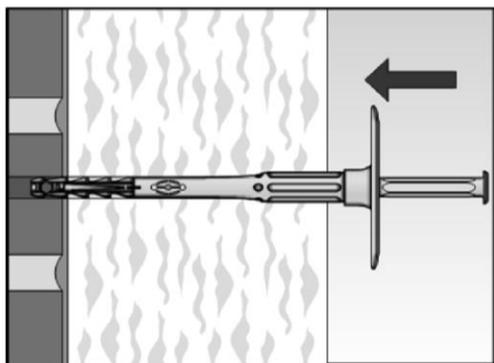
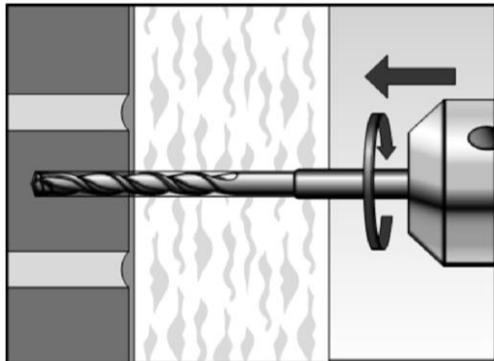
Figures not to scale

fischer termoz LO 8

**Intended use**  
Installation parameters, minimum thickness, distances and spacing

**Annex B 2**

**Installation instructions:**



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

2. Insert anchor manually.

3. Set anchor by hammer blows. The bottom side of the plate must be flush with the ETICS.

4. Correctly installed anchor.

Figures not to scale

fischer termoz LO 8

**Intended use**  
Installation instruction

**Annex B 3**

**Table C1.1:** Characteristic tension resistance  $N_{Rk}$  for a single anchor

Base material	Use cat.	Bulk density $\rho$ [kg/dm <sup>3</sup> ]	Min. compressive strength $f_b$ [N/mm <sup>2</sup> ]	Remarks	Drill <sup>1)</sup> method	Characteristic resistance $N_{Rk}$ [kN]
Normal weight concrete ≥ C12/15 – C50/60 acc. to EN 206-1:2000	A				H	0,5
Clay bricks <b>Mz</b> , acc. to EN 771-1:2011	B	≥ 2,0	12	Cross section reduced up to 15% by perforation vertically to the resting area	H	0,6
Calcium silicate solid bricks <b>KS</b> , acc. to EN 771-2:2011	B	≥ 1,8	12		H	0,6

<sup>1)</sup> H = Hammer drilling

**Table C1.2:** Point thermal transmittance acc. to EOTA Technical Report TR 025: 2016-05

Anchor type	Thickness of insulation material $h_D$ [mm]	Point thermal transmittance $\chi$ [W/K]
termoz LO 8	60 - 180	0,000

**Table C1.3:** Plate stiffness acc. to 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]
termoz LO 8	60	1,6	0,4

**Table C1.4:** Displacements of the termoz LO 8

Base material	Tension load F [kN]	Displacements $\delta$ [mm]
Concrete C12/15 – C50/60 (EN 206-1:2000)	0,15	0,2
Clay bricks, <b>Mz</b> (EN 771-1:2011)	0,20	0,2
Calcium silicate solid bricks, <b>KS</b> (EN 771-2:2011)	0,20	0,3

fischer termoz LO 8

**Performance**

Characteristic tension resistance, point thermal transmittance, plate stiffness, displacements

**Annex C 1**