

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

**ETA-21/0780**  
**of 12 November 2021**

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

BAUFIX TERMOZ CN

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

Monoseto E.E.  
Georgikis Scholis Ave. & Marinou Antipa 1  
GR 57001 PILEA, THEASSALONIKI  
GRIECHENLAND

Manufacturing plant

Monoseto

This European Technical Assessment  
contains

21 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

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## Specific Part

### 1 Technical description of the product

The nailed-in anchor BAUFIX TERMOZ CN, BAUFIX TERMOZ CN R and BAUFIX TERMOZ CNPlus consists of an anchor sleeve made of polypropylene (virgin material), an insulation plate made of glass fibre reinforced polyamide (virgin material) and a special compound nail consisting of two parts, one made of glass fibre reinforced polyamide for the shaft element and the other part made of galvanised steel.

The anchor sleeve of the anchor with an overall length  $\geq 250$  mm consists of an anchor sleeve made of polypropylene (virgin material) and an anchor shaft made of glass fibre reinforced polyamide (virgin material).

The specific nail for the anchor type BAUFIX TERMOZ CN / 250 – 390 and BAUFIX TERMOZ CN R / 250 – 310 is made of galvanized steel which is used together with a separate plastic cylinder made of glass fibre reinforced polyamide.

The anchor may in addition be combined with the anchor plates 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 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 C1 and C2 See Annex B2
Displacements	See Annex C4
Plate stiffness	See Annex C4

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

Essential characteristic	Performance
Point thermal transmittance	See Annex C3

**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**

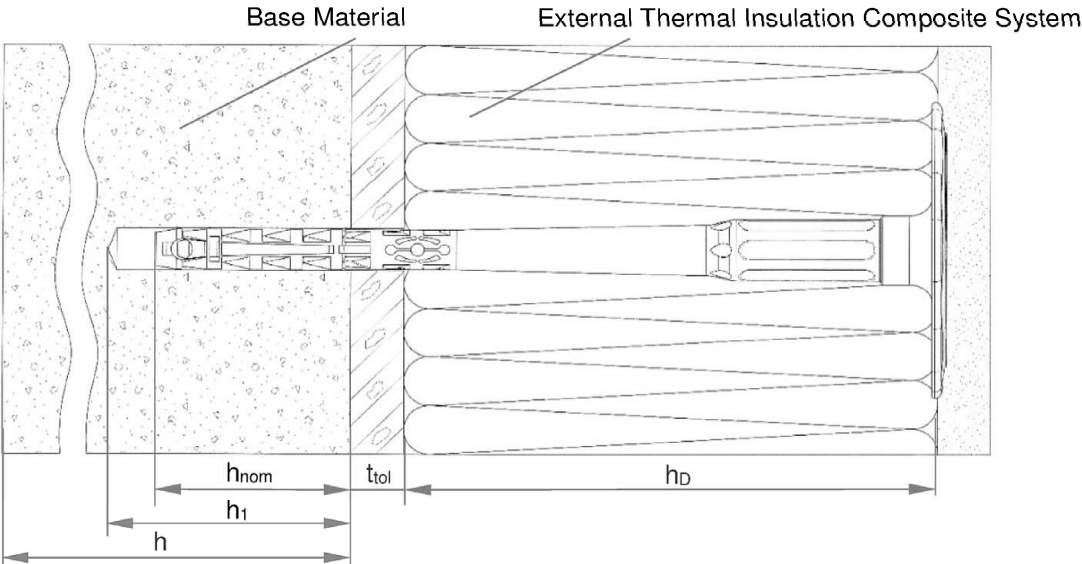
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 12 November 2021 by Deutsches Institut für Bautechnik

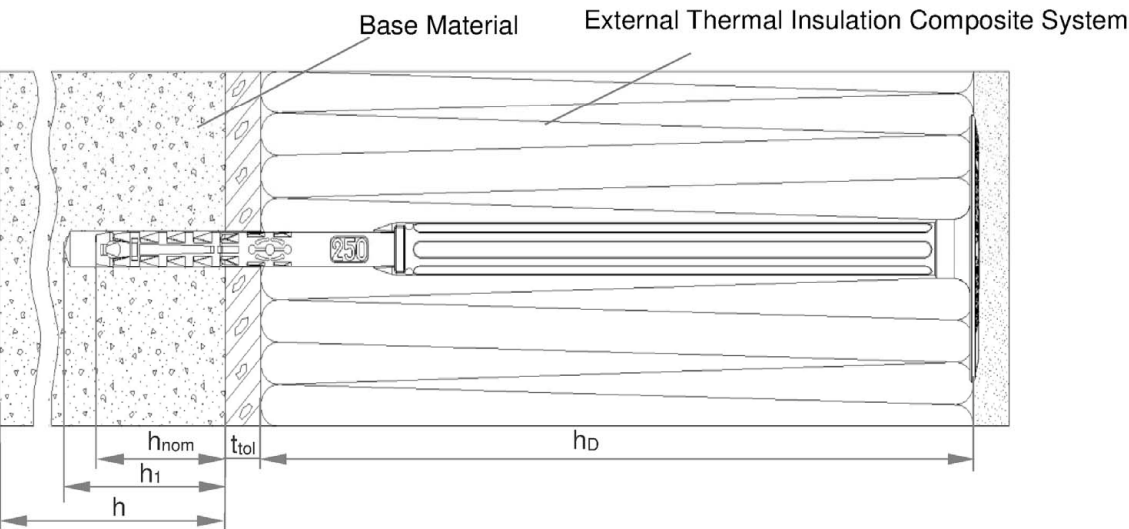
Dipl.-Ing. Beatrix Wittstock  
Head of Section

*beglaubigt:*  
Aksünger

**BAUFIX TERMOZ CN / 110 – 230 / BAUFIX TERMOZ CNPlus / 110 – 230 – flush mounted**



**BAUFIX TERMOZ CN/ 250 – 390 / BAUFIX TERMOZ CN R / 250 – 310 /  
BAUFIX TERMOZ CNPlus / 250-390 – flush mounted**



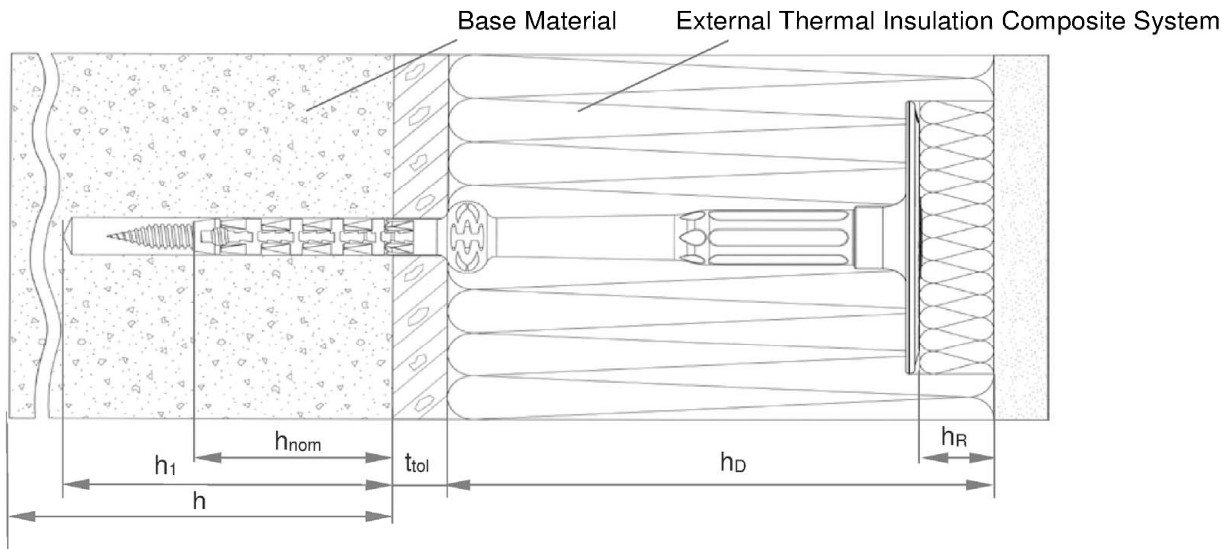
- Legend**
- h<sub>nom</sub> = Overall plastic anchor embedment depth in the base material
  - h<sub>1</sub> = Depth of drilled hole to deepest point
  - h = Thickness of member (wall)
  - h<sub>D</sub> = Thickness of insulation material
  - t<sub>tol</sub> = Thickness of equalizing layer or non-load bearing coating

**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

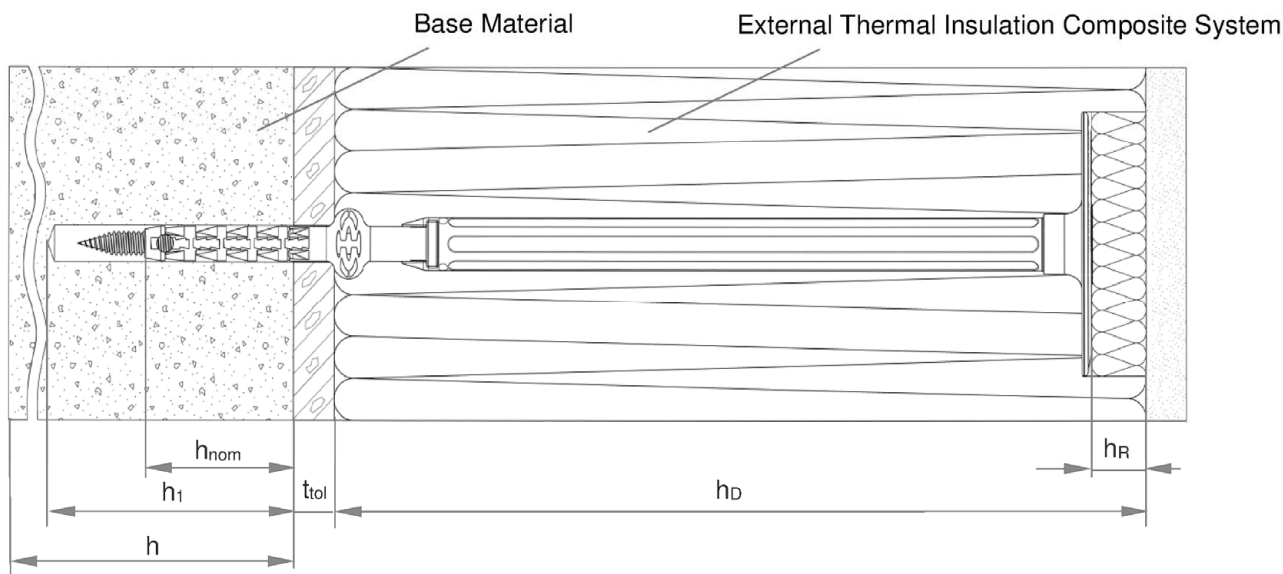
**Product description**  
Installed anchor – flush-mounted

**Annex A1**

**BAUFIX TERMOZ CNPlus / 110 – 230 – countersunk mounted**



**BAUFIX TERMOZ CNPlus / 250 – 390 – countersunk mounted**



**Legend**

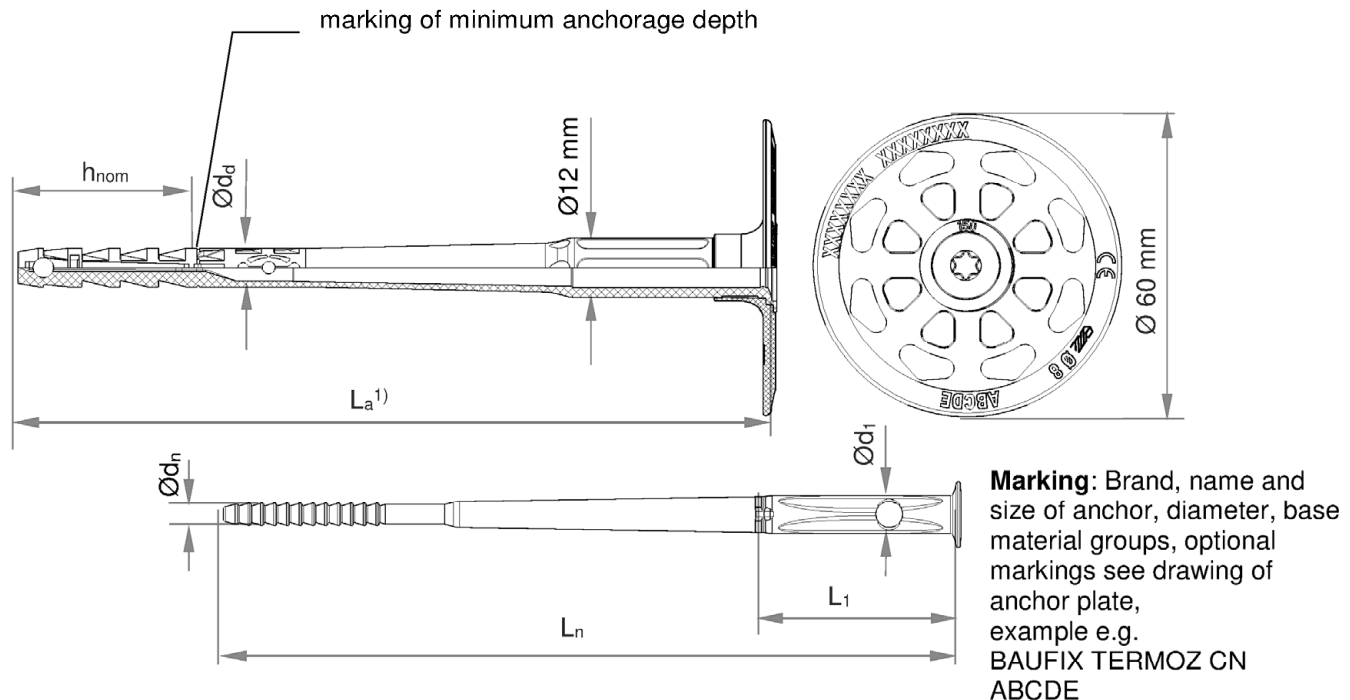
- $h_{nom}$  = Overall plastic anchor embedment depth in the base material
- $h_1$  = Depth of drilled hole to deepest point
- $h$  = Thickness of member (wall)
- $h_D$  = Thickness of insulation material
- $h_R$  = Thickness of insulation cap
- $t_{tol}$  = Thickness of equalizing layer or non-load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

**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

**Product description**  
Installed anchor – countersunk mounted

**Annex A2**

## BAUFIX TERMOZ CN/ 110-230



1) Various length of the anchors are possible

e.g. for BAUFIX TERMOZ CN/ 110-230:  
 $110 \text{ mm} \geq L_a \leq 230 \text{ mm}$   
 $L_a = L_n + 4 \text{ mm}$

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

e.g. for BAUFIX TERMOZ CNx150:  $L_a = 148 \text{ mm}$ ,  $h_{nom} = 35 \text{ mm}$ ,  $t_{tol} = 10 \text{ mm}$   
 $h_D = 148 - 35 - 10 \approx 100$

**Table A3.1: Dimensions BAUFIX TERMOZ CN/ 110-230**

Anchor type	Anchor sleeve		Specific compound nail		
	$\varnothing d_d$ [mm]	$h_{nom}$ [mm]	$\varnothing d_n$ [mm]	$L_1$ [mm]	$\varnothing d_1$ [mm]
BAUFIX TERMOZ CN/ 110-230	8	35/55 <sup>2)</sup>	4,5	40	8

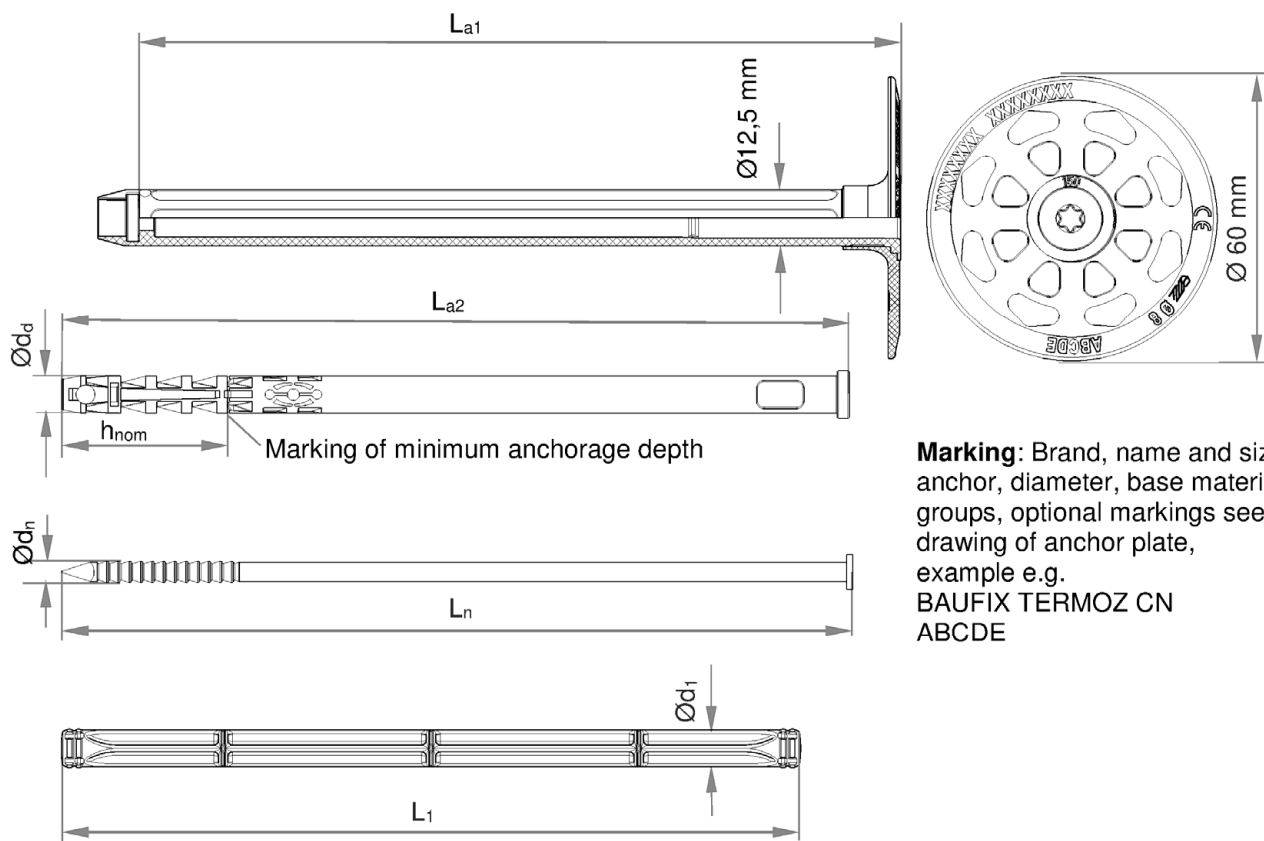
2) Only for base material group E

**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

**Product description**  
Dimensions BAUFIX TERMOZ CN/ 110-230

**Annex A3**

## BAUFIX TERMOZ CN/ 250 – 390



**Marking:** Brand, name and size of anchor, diameter, base material groups, optional markings see drawing of anchor plate, example e.g. BAUFIX TERMOZ CN ABCDE

Various lengths of the anchors are possible:

e.g. for BAUFIX TERMOZ CN/ 250 – 390:

$$250 \text{ mm} \geq L_{a1} + L_{a2} \leq 390 \text{ mm}$$

$$L_a = L_{a1} + L_{a2} = L_n + 160,5 \text{ mm}$$

Determination of maximum thickness of insulation:

$$h_D = L_a - h_{nom} - t_{tol}$$

e.g. for BAUFIX TERMOZ CNx330:

$$L_a = 328 \text{ mm}, h_{nom} = 35 \text{ mm}, t_{tol} = 10 \text{ mm}$$

$$h_D = 328 - 35 - 10 \approx 280 \text{ mm}$$

**Table A4.1: Dimensions BAUFIX TERMOZ CN/ 250 – 390**

Anchor type	Shaft	Anchor sleeve			Nail		Plastic cylinder	
	L <sub>a1</sub> [mm]	Ø d <sub>d</sub> [mm]	h <sub>nom</sub> [mm]	L <sub>a2</sub> [mm]	Ø d <sub>n</sub> [mm]	L <sub>n</sub> [mm]	L <sub>1</sub> [mm]	Ø d <sub>1</sub> [mm]
BAUFIX TERMOZ CN 250 – 390	161	8	35/55 <sup>1)</sup>	87 - 247	4,5	(L <sub>a1</sub> +L <sub>a2</sub> ) – 160,5	157	8

<sup>1)</sup> Only for base material group E

**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

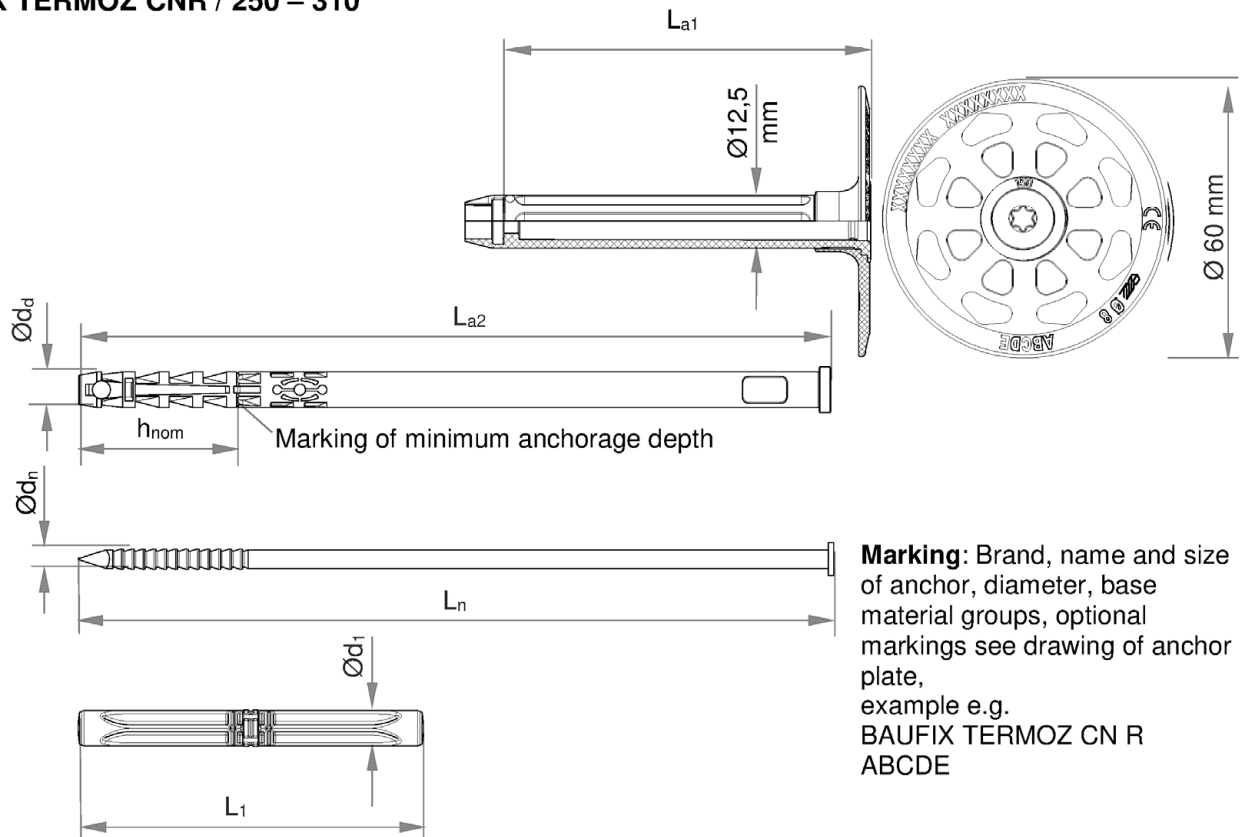
**Product description**

Dimensions BAUFIX TERMOZ CN/ 250-390

**Annex A4**



## BAUFIX TERMOZ CNR / 250 – 310



Various lengths of the anchors are possible:

e.g. for BAUFIX TERMOZ CNR / 250 – 310:

$$250 \text{ mm} \geq L_{a1} + L_{a2} \leq 310 \text{ mm}$$

$$L_a = L_{a1} + L_{a2} = L_n + 80,5 \text{ mm}$$

Determination of maximum thickness of insulation:

$$h_D = L_a - h_{nom} - t_{tol}$$

e.g. for BAUFIX TERMOZ CNR 8x250:

$$L_a = 248 \text{ mm}, h_{nom} = 35 \text{ mm}, t_{tol} = 10 \text{ mm}$$

$$h_D = 248 - 35 - 10 \approx 200 \text{ mm}$$

**Table A5.1: Dimensions BAUFIX TERMOZ CNR / 250 – 310**

Anchor type	Shaft	Anchor sleeve			Nail		Plastic cylinder	
	$L_{a1}$ [mm]	$\varnothing d_d$ [mm]	$h_{nom}$ [mm]	$L_{a2}$ [mm]	$\varnothing d_n$ [mm]	$L_n$ [mm]	$L_1$ [mm]	$\varnothing d_1$ [mm]
BAUFIX TERMOZ CN R 250 – 310	81	8	35/55 <sup>1)</sup>	167 - 247	4,5	$(L_{a1} + L_{a2}) - 80,5$	77	8

<sup>1)</sup> Only for base material group E

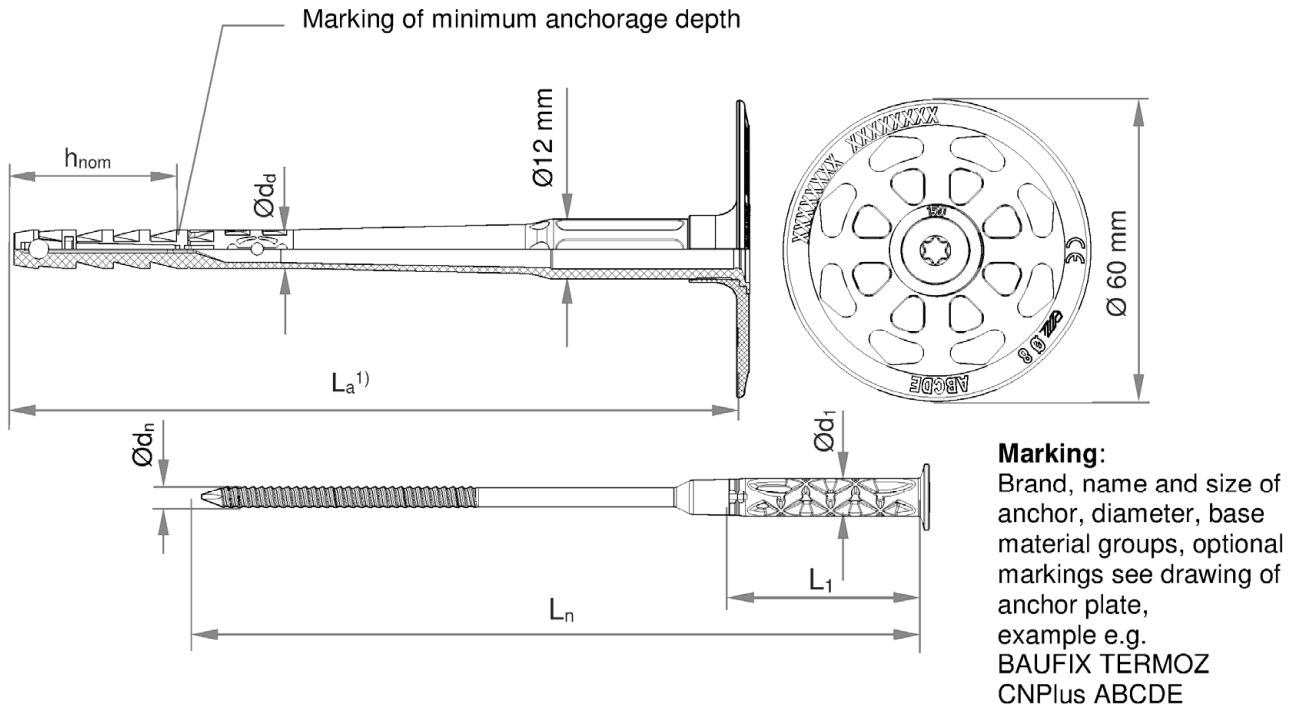
**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

**Product description**

Dimensions BAUFIX TERMOZ CNR / 250-310

**Annex A5**

## BAUFIX TERMOZ CNPlus / 110–230



<sup>1)</sup> Various lengths of the anchors are permissible:

e.g. for BAUFIX TERMOZ CNPlus / 110 – 230:

$110 \text{ mm} \geq L_a \leq 230 \text{ mm}$

$L_a = L_n + 1,5 \text{ mm}$

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

e.g. for BAUFIX TERMOZ CNPlus x150:

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

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

**Table A6.1: Dimensions BAUFIX TERMOZ CNPlus / 110–230**

Anchor type	Anchor sleeve		Specific compound nail			
	Ø d <sub>d</sub> [mm]	h <sub>nom</sub> [mm]	Ø d <sub>n</sub> [mm]	L <sub>n</sub> [mm]	L <sub>1</sub> [mm]	Ø d <sub>1</sub> [mm]
BAUFIX TERMOZ CNPlus / 110-230	8	35/55 <sup>1)</sup>	4,3	L <sub>a</sub> – 1,5	40	8

<sup>1)</sup> Only for base material group D & E

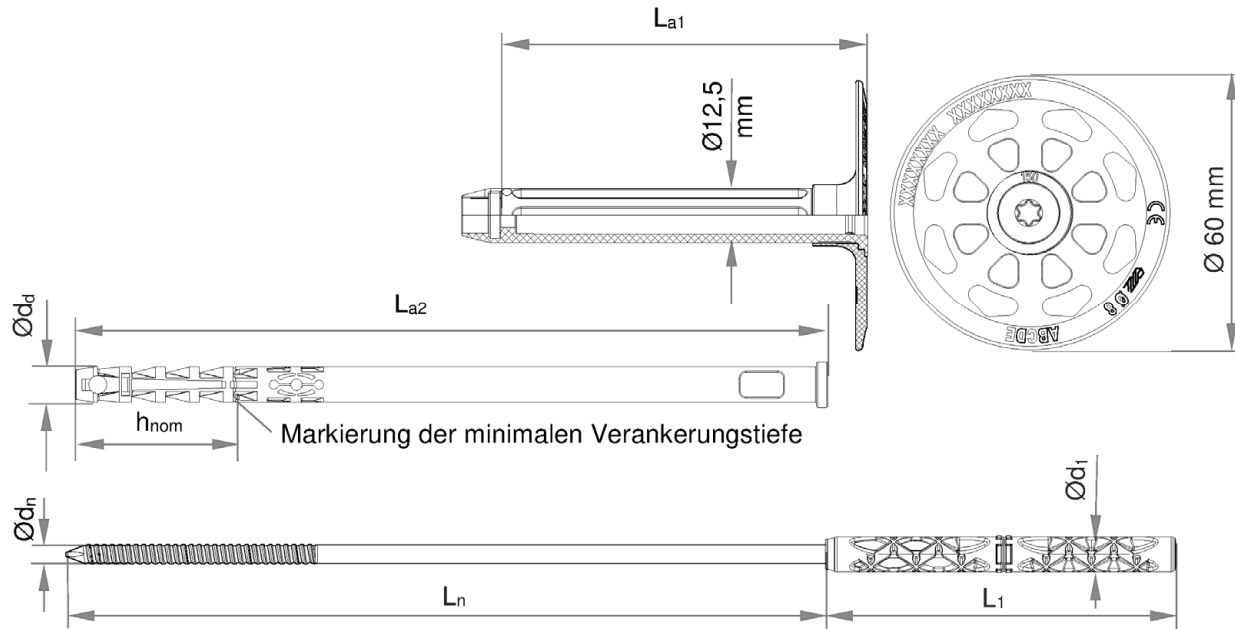
**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

**Product description**

Dimensions BAUFIX TERMOZ CNPlus / 110-230

**Annex A6**

## BAUFIX TERMOZ CNPlus / 250–310



Various lengths of the anchors are possible:

e.g. for BAUFIX TERMOZ CNPlus / 250 – 310:  
 $250 \text{ mm} \geq L_{a1} + L_{a2} \leq 310 \text{ mm}$   
 $L_a = L_{a1} + L_{a2} = L_n + 79,5 \text{ mm}$

Determination of maximum thickness of insulation:

$$h_D = L_a - h_{nom} - t_{tol}$$

e.g. for BAUFIX TERMOZ CNPlus x 250:

$$L_a = 248 \text{ mm}, h_{nom} = 35 \text{ mm}, t_{tol} = 10 \text{ mm}$$

$$h_D = 248 - 35 - 10 \approx 200 \text{ mm}$$

**Marking:** Brand, name and size of anchor, diameter, base material groups, optional markings see drawing of anchor plate, example e.g. BAUFIX TERMOZ CNPlus ABCDE

**Table A7.1: Dimensions BAUFIX TERMOZ CNPlus / 250 – 310**

Anchor type	Shaft	Anchor sleeve			Specific compound nail			
	$L_{a1}$ [mm]	$\varnothing d_d$ [mm]	$h_{nom}$ [mm]	$L_{a2}$ [mm]	$\varnothing d_n$ [mm]	$L_n$ [mm]	$L_1$ [mm]	$\varnothing d_1$ [mm]
BAUFIX TERMOZ CNPlus 250 – 310	81	8	35/55 <sup>1)</sup>	167 - 247	4,3	$(L_{a1}+L_{a2}) - 79,5$	77,5	8

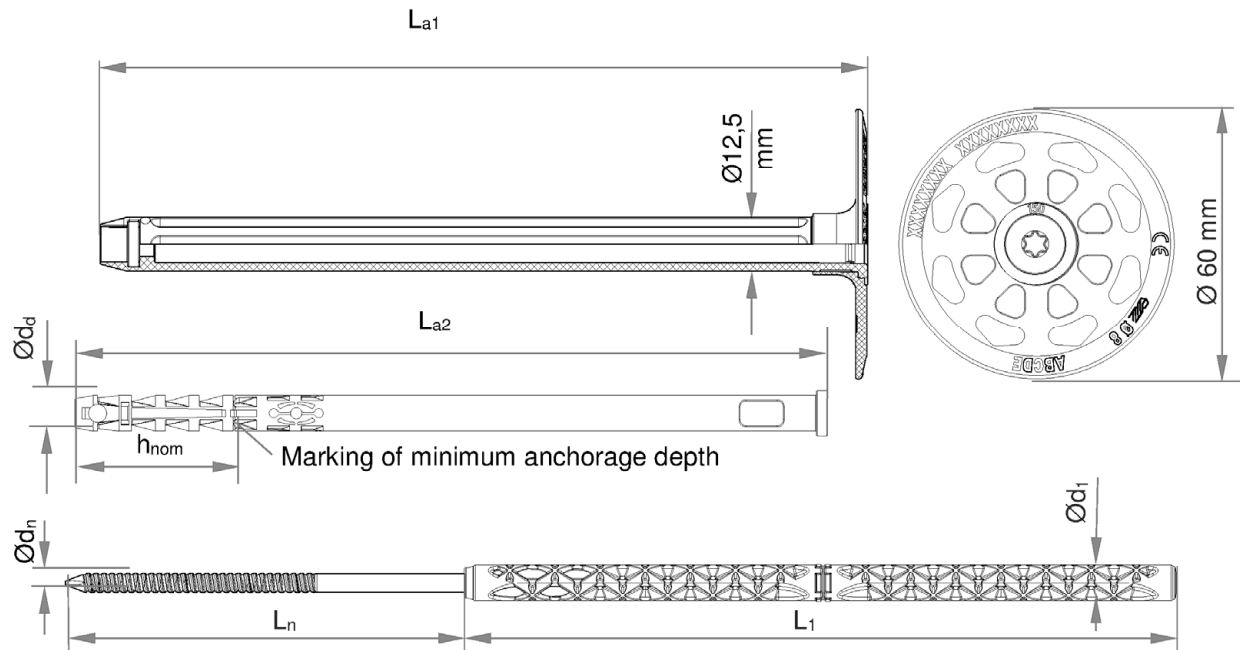
<sup>1)</sup> Only for base material group D & E

**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

**Product description**  
Dimensions BAUFIX TERMOZ CNPlus / 250-310

**Annex A7**

## BAUFIX TERMOZ CNPlus / 330–390



Various lengths of the anchors are possible:

e.g. for BAUFIX TERMOZ CNPlus / 330 – 390:

$$330 \text{ mm} \geq L_{a1} + L_{a2} \leq 390 \text{ mm}$$

$$L_a = L_{a1} + L_{a2} = L_n + 159,5 \text{ mm}$$

Determination of maximum thickness of insulation:

$$h_D = L_a - h_{nom} - t_{tol}$$

e.g. for BAUFIX TERMOZ CNPlus x 330:

$$L_a = 328 \text{ mm}, h_{nom} = 35 \text{ mm}, t_{tol} = 10 \text{ mm}$$

$$h_D = 328 - 35 - 10 \approx 280 \text{ mm}$$

**Marking:** Brand, name and size of anchor, diameter, base material groups, optional markings see drawing of anchor plate, example e.g. BAUFIX TERMOZ CNPlus ABCDE

**Table A8.1: Dimensions BAUFIX TERMOZ CNPlus / 330 – 390**

Anchor type	Shaft	Anchor sleeve			Specific compound nail			
	$L_{a1}$ [mm]	$\varnothing d_d$ [mm]	$h_{nom}$ [mm]	$L_{a2}$ [mm]	$\varnothing d_n$ [mm]	$L_n$ [mm]	$L_1$ [mm]	$\varnothing d_1$ [mm]
BAUFIX TERMOZ CNPlus 330 – 390	161	8	35/55 <sup>1)</sup>	167 - 247	4,3	$(L_{a1}+L_{a2}) - 159,5$	157,5	8

<sup>1)</sup> Only for base material group D & E

**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR | BAUFIX TERMOZ CNPlus**

**Product description**

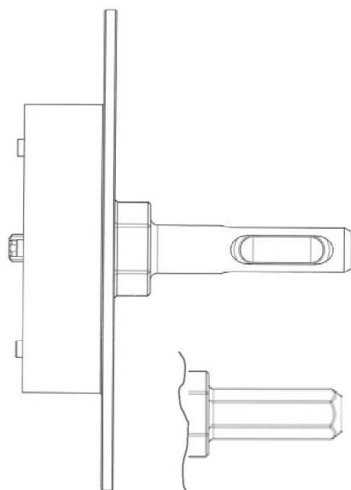
Dimensions BAUFIX TERMOZ CNPlus / 330-390

**Annex A8**

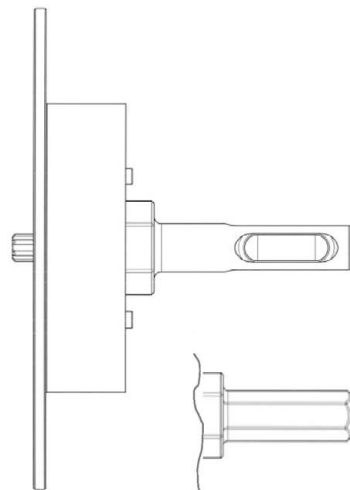
## Setting tool with SDS adapter or hexagonal adapter available

### BAUFIX TERMOZ CNPlus

#### Countersunk setting <sup>1)</sup>

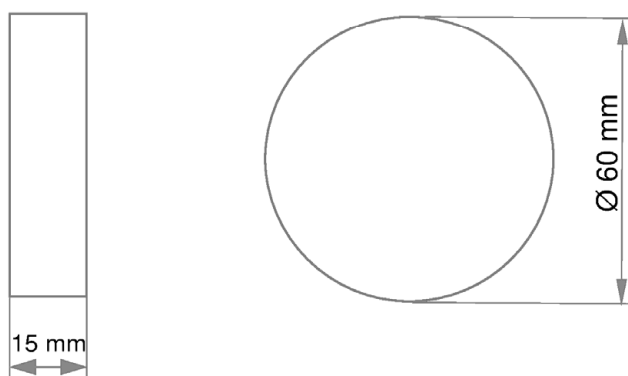


#### optional plain surface setting



<sup>1)</sup> Alternatively, it is possible to mill the insulation material with a standard, market-available milling tool.

### Polystyrene or mineral wool cap



**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

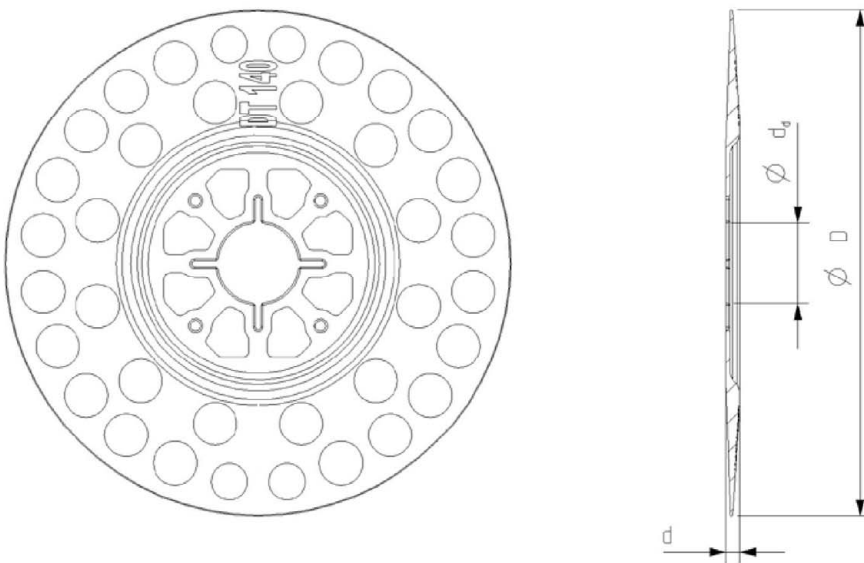
**Product description**  
Setting tool for BAUFIX TERMOZ CNPlus

**Annex A9**

**Table A10.1: Material**

Designation	Material
Anchor sleeve	PP (virgin material), colour: grey
Shaft BAUFIX TERMOZ CN/ 250 – 390 or BAUFIX TERMOZ CNR / 250 – 310 or BAUFIX TERMOZ CNPlus / 250 - 390	PA6 (virgin material) GF, colour: grey
Plastic cylinder BAUFIX TERMOZ CN/ 250 – 390 or BAUFIX TERMOZ CNR / 250 – 310	PA6 (virgin material) GF
Specific nail BAUFIX TERMOZ CN/ 250 – 390 or BAUFIX TERMOZ CNR / 250 – 310	Galvanized steel gvz with Zn5/Ag or Zn5/An acc. to EN ISO 4042:2018
Specific compound nail BAUFIX TERMOZ CN/ 110 – 230 or BAUFIX TERMOZ CNPlus / 110 – 230 or BAUFIX TERMOZ CNPlus / 250 - 390	PA6 GF (plastic part of compound nail) Galvanized steel gvz with Zn5/Ag or Zn5/An acc. to EN ISO 4042:2018
Anchor plate	PA6 (virgin material) GF colour: grey, orange, red, green, yellow, blue
Slip-on plate	PA6 (virgin material) GF colour: grey, orange, red, green, yellow, blue

**Drawing of the slip-on plates**



**Table A10.2: Slip-on plate, diameters and material**

Slip-on plate	Ø D [mm]	Ø d <sub>d</sub> [mm]	d [mm]	Material
DT 90 / 110 / 140	90 / 110 / 140	22,5	3,9	PA6 GF

**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

**Product description**

Material, Slip-on plates combined with BAUFIX TERMOZ CN |  
BAUFIX TERMOZ CNR | BAUFIX TERMOZ CNPlus

**Annex A10**

## 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:

- Compacted normal weight concrete without fibres (base material group A), according to Annex C1, and C2.
- Solid masonry (base material group B), according to Annex C1 and C2.
- Hollow or perforated masonry (base material group C), according to Annex C1 and C2.
- Lightweight aggregate concrete (base material group D), according to Annex C1 and C2.
- Autoclaved aerated concrete (base material group E), according to Annex C1 and C2.
- For other base materials of the base material group 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 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  $\gamma_F = 1,5$  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:

- Hole drilling by the drill modes according to Annex C1 and C2.
- 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.

**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

**Intended use**  
Specification

**Annex B1**

**Table B2.1: Installation parameters / flush mounted**

Anchor type			BAUFIX TERMOZ CN   BAUFIX TERMOZ CN R BAUFIX TERMOZ CNPlus
Drill hole diameter	$d_0$	= [mm]	8
Cutting diameter of drill bit	$d_{cut}$	≤ [mm]	8,45
Depth of drilled hole to deepest point	$h_1$	≥ [mm]	45/55 <sup>1)</sup> /65 <sup>2)</sup>
Overall plastic anchor embedment depth in the base material	$h_{nom}$	≥ [mm]	35/45 <sup>1)</sup> /55 <sup>2)</sup>

<sup>1)</sup> Only BAUFIX TERMOZ CNPlus: for weather shell (thin concrete slabs) :  $35 \text{ mm} \leq h_{nom} \leq 45 \text{ mm}$

<sup>2)</sup> BAUFIX TERMOZ CN | BAUFIX TERMOZ CN R : Only for base material group "E"  
BAUFIX TERMOZ CNPlus: Only for base material group "D" & "E"

**Table B2.2: Installation parameters / countersunk mounted**

Anchor type			BAUFIX TERMOZ CNPlus
Drill hole diameter	$d_0$	= [mm]	8
Cutting diameter of drill bit	$d_{cut}$	≤ [mm]	8,45
Depth of drilled hole to deepest point	$h_1$	≥ [mm]	60/70 <sup>1)</sup> /80 <sup>2)</sup>
Overall plastic anchor embedment depth in the base material	$h_{nom}$	≥ [mm]	35/45 <sup>1)</sup> /55 <sup>2)</sup>

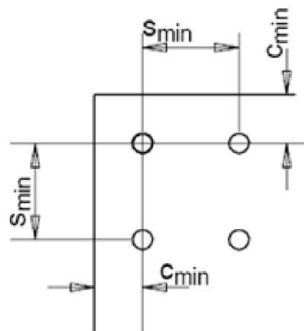
<sup>1)</sup> valid for weather shell (thin concrete slabs):  $35 \text{ mm} \leq h_{nom} \leq 45 \text{ mm}$

<sup>2)</sup> Only for base material group "D" & "E"

**Table B2.3: Minimum distances and spacing**

			BAUFIX TERMOZ CN BAUFIX TERMOZ CN R BAUFIX TERMOZ CNPlus
Minimum thickness of member	$h_{min}$	= [mm]	100
Minimum spacing	$s_{min}$	= [mm]	100
Minimum edge distance	$c_{min}$	= [mm]	100

**Scheme of distance and spacing**



**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

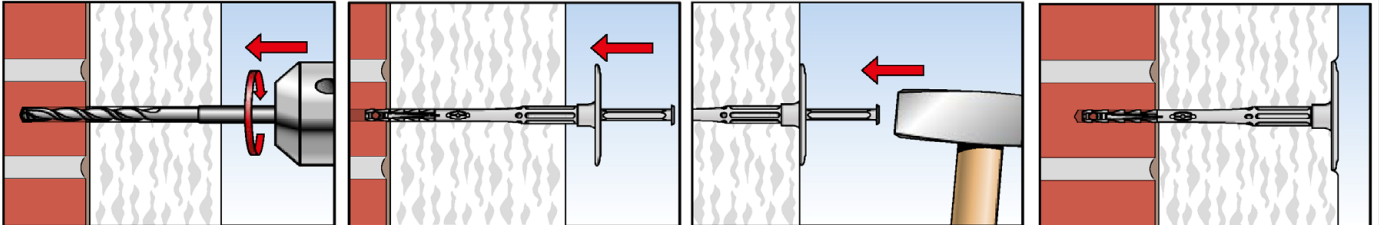
**Intended use**  
Installation parameters  
Minimum distances and spacing

**Annex B2**



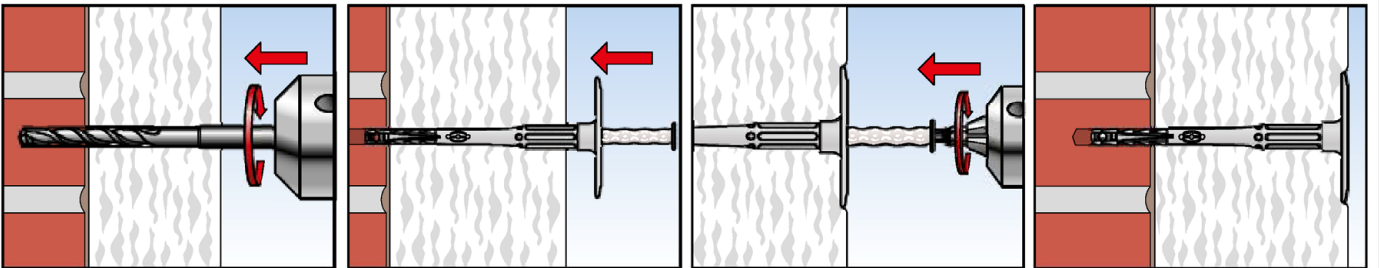
## Installation instructions

### Setting of anchor (flush mounted) by hammer / BAUFIX TERMOZ CN | CN R | CNPlus



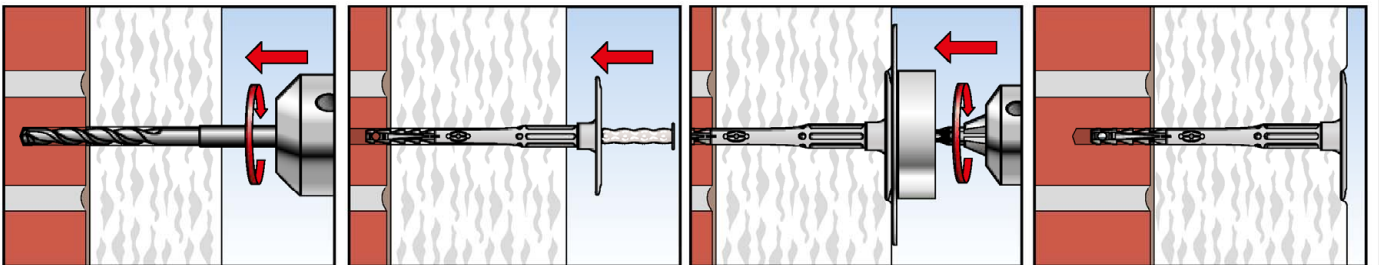
1. Drill hole by corresponding drilling method
2. Insert anchor manually
3. Set anchor by hammerblows
4. Correctly installed anchor

### Setting of anchor (flush mounted) by machine / BAUFIX TERMOZ CNPlus



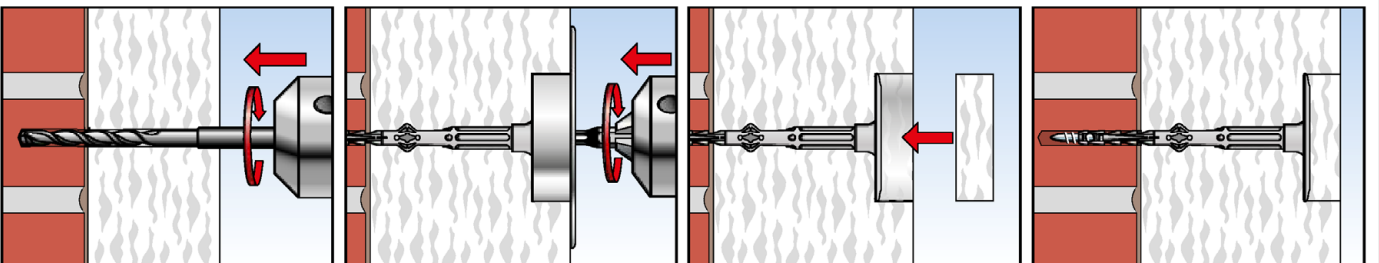
1. Drill hole by corresponding drilling method
2. Insert anchor manually
3. Set anchor by machine.
4. Correctly installed anchor

### Setting of anchor (flush mounted) by setting tool \ BAUFIX TERMOZ CNPlus



1. Drill hole by corresponding drilling method
2. Insert anchor manually
3. Set anchor by setting tool.
4. Correctly installed anchor

### Setting of anchor (countersunk mounted) by setting tool / BAUFIX TERMOZ CNPlus



1. Drill hole by corresponding drilling method
2. Insert anchor and set anchor by setting tool.
3. Put on polystyrene or mineral wool cap
4. Correctly installed anchor

**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

**Intended use**  
Installation instruction

**Annex B3**

**Table C1.1: Characteristic resistance  $N_{Rk}$  in [kN] to tension loads for a single anchor**

Base material	Base material group <sup>1)</sup>	Min. compressive strength $f_b$ [N/mm <sup>2</sup> ]	Bulk density $\rho$ [kg/dm <sup>3</sup> ]	Remarks	Drill method <sup>2)</sup>	Characteristic resistance $N_{Rk}$ [kN] <b>BAUFIX TERMOZ CN and CN R</b>
Concrete C12/15 - C50/60 EN 206:2013+A1:2016	A	-	-	Compacted normal weight concrete without fibres	H	<b>0,9</b>
Solid clay bricks <b>Mz</b> as per EN 771-1:2011+A1:2015	B	12	$\geq 2,0$	Cross section reduced up to 15% by perforation vertically to the resting area	H	<b>0,9</b>
Calcium silicate solid bricks <b>KS</b> as per EN 771-2:2011+A1:2015	B	12	$\geq 1,8$		H	<b>0,9</b>
Solid concrete blocks <b>Vbn</b> as per EN 771-3:2011+A1:2015	B	20	$\geq 2,0$		H	<b>0,75</b>
Lightweight concrete blocks <b>Vbl</b> as per EN 771-3:2011+A1:2015	B	8	$\geq 1,4$		H	<b>0,6</b>
Vertically perforated clay bricks <b>Hlz</b> as per EN 771-1:2011+A1:2015	C	12	$\geq 1,0$	Vertically perforation <sup>4)</sup> >15% and $\leq 50\%$ , Exterior web thickness $\geq 15$ mm	R	<b>0,6</b>
Hollow calcium silicate brick <b>KSL</b> as per EN 771-2:2011+A1:2015	C	20	$\geq 1,4$	Vertically perforation <sup>4)</sup> >15% and $\leq 50\%$ , Exterior web thickness $\geq 23$ mm	H	<b>0,75</b>
		12				<b>0,5</b>
Lightweight concrete hollow blocks <b>Hbl</b> as per EN 771-3:2011+A1:2015	C	10	$\geq 1,2$	Vertically perforation <sup>4)</sup> >15% and $\leq 50\%$ , Exterior web thickness $\geq 38$ mm	H	<b>0,6</b>
Lightweight aggregate concrete <b>LAC</b> as per EN 1520:2011, EN 771-3:2011+A1:2015	D	6	$\geq 0,8$	-	H	<b>0,6</b>
		4				<b>0,4</b>
Autoclaved aerated concrete blocks, <b>AAC</b> as per EN 771-4:2011+A1:2015	E	6	$> 0,6$	-	R	<b>0,3<sup>3)</sup></b>
		4	$> 0,4$			<b>0,3<sup>3)</sup></b>

<sup>1)</sup> See Annex B1

<sup>2)</sup> R = Rotary drilling | H = Hammer drilling

<sup>3)</sup> Only valid for  $h_{nom} \geq 55$  mm

<sup>4)</sup> Cross section reduced by perforation vertically to the resting area

**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNplus**

**Performance**

Characteristic resistance BAUFIX TERMOZ CN and  
BAUFIX TERMOZ CNR

**Annex C1**

**Table C2.1: Characteristic resistance  $N_{Rk}$  in [kN] to tension loads for single anchor**

Base material	Base material group <sup>1)</sup>	Min. compressive strength $f_b$ [N/mm <sup>2</sup> ]	Bulk density $\rho$ [kg/dm <sup>3</sup> ]	Remarks	Drill method <sup>2)</sup>	Characteristic resistance $N_{Rk}$ [kN] <b>BAUFIX TERMOZ CNPlus</b>
Concrete C12/15 - C50/60 EN 206:2013+A1:2016	A	-	-	Compacted normal weight concrete without fibres	H	<b>0,9</b>
Weather resistant concrete shell C20/25 –C50/60 EN 206:2013+A1:2016	A	-	-	Compacted normal weight concrete without fibres $h \geq 42$ mm; $t_{fix} \geq 35$ mm	H	<b>0,9</b>
Solid clay bricks <b>Mz</b> as per EN 771-1:2011+A1:2015	B	20	$\geq 1,8$	Cross section reduced up to 15% by perforation vertically to the resting area	H	<b>0,9</b>
Calcium silicate solid bricks <b>KS</b> as per EN 771-2:2011+A1:2015	B	20	$\geq 1,8$		H	<b>0,9</b>
Solid concrete blocks <b>Vbn</b> as per EN 771-3:2011+A1:2015	B	20	$\geq 2,0$		H	<b>0,9</b>
Lightweight concrete blocks <b>Vbl</b> as per EN 771-3:2011+A1:2015	B	10	$\geq 1,6$		H	<b>0,75</b>
Vertically perforated clay bricks <b>Hlz</b> as per EN 771-1:2011+A1:2015	C	48	$\geq 1,6$	Vertically perforation <sup>4)</sup> >15% and $\leq 50\%$ , Exterior web thickness $\geq 17$ mm	R	<b>0,75</b>
		12	$\geq 1,0$	Vertically perforation <sup>4)</sup> >15% and $\leq 50\%$ , Exterior web thickness $\geq 15$ mm		<b>0,5</b>
Hollow calcium silicate brick <b>KSL</b> as per EN 771-2:2011+A1:2015	C	16	$\geq 1,4$	Vertically perforation <sup>4)</sup> >15% and $\leq 50\%$ , Exterior web thickness $\geq 16$ mm	H	<b>0,5</b>
Lightweight concrete hollow blocks <b>Hbl</b> as per EN 771-3:2011+A1:2015	C	10	$\geq 1,2$	Vertically perforation <sup>4)</sup> >15% and $\leq 50\%$ , Exterior web thickness $\geq 38$ mm	H	<b>0,6</b>
Lightweight aggregate concrete <b>LAC</b> as per EN 1520:2011, EN 771-3:2011+A1:2015	D	6	$\geq 0,9$	-	H	<b>0,4<sup>3)</sup></b>
Autoclaved aerated concrete blocks <b>AAC</b> as per EN 771-4:2011+A1:2015	E	4	$> 0,4$	-	R	<b>0,3<sup>3)</sup></b>

<sup>1)</sup> See Annex B1

<sup>2)</sup> R = Rotary drilling | H = Hammer drilling

<sup>3)</sup> Only valid for  $h_{nom} \geq 55$  mm

<sup>4)</sup> Cross section reduced by perforation vertically to the resting area

**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

**Performance**  
Characteristic resistance BAUFIX TERMOZ CNPlus

**Annex C2**

**Table C3.1: Point thermal transmittance acc. to EOTA Technical Report TR 025: 2016 – 05  
BAUFIX TERMOZ CN| BAUFIX TERMOZ CN R**

Anchor type	Thickness of insulation material $h_D$ [mm]	Point thermal transmittance $\chi$ [W/K]
BAUFIX TERMOZ CN/ 110-230	60 - 80	0,001
	> 80 - 180	0,000
BAUFIX TERMOZ CN/ 250-350	200 - 300	0,000
BAUFIX TERMOZ CN/ 370-390	> 300 - 340	0,001
BAUFIX TERMOZ CNR / 250-310	200 - 260	0,001

**Table C3.2: Point thermal transmittance acc. to EOTA Technical Report TR 025: 2016 – 05  
BAUFIX TERMOZ CNPlus - flush mounted**

Thickness of insulation material h <sub>D</sub> [mm]	Point thermal transmittance χ [W/K] Base material group					
	A	B	C	D	E	
60	0,001	0,001	0,001	0,001	0	
80					0,001	
100			0,002	0,002		0,001
120						
140	0,002	0,002	0,001			
160						
180						
200						
220	0,001	0,001		0		
240						
260						
280						
300	0,001	0,001			0,001	0
320						
340				-	-	

**Table C3.3: Point thermal transmittance acc. to EOTA Technical Report TR 025: 2016 – 05  
BAUFIX TERMOZ CNPlus - countersunk mounted**

Thickness of insulation material h <sub>D</sub> [mm]	Point thermal transmittance χ [W/K] Base material group					
	A	B	C	D	E	
80	0,001	0	0	0	0	
100		0,001	0,001	0,001	0,001	
120						
140						
160	0,002	0,002				
180						
200	0,001	0,001				0,001
220						
240						
260						
280	0	0	0	0		
300	0,001	0,001				
320			0,001			
340				-	-	

**BAUFIX TERMOZ CN| BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

**Performance**  
Point thermal transmittance

**Annex C3**

**Table C4.1: Plate stiffness acc. to EOTA Technical Report TR 026: 2016 – 05**

Anchor type	Size of the anchor plate [mm]	Load resistance of the anchor plate [kN]	Plate stiffness [kN/mm]
BAUFIX TERMOZ CN   BAUFIX TERMOZ CNR	60	1,7	0,6

**Table C4.2: Displacements BAUFIX TERMOZ CN| BAUFIX TERMOZ CNR**

Base material	BAUFIX TERMOZ CN   BAUFIX TERMOZ CNR	
	Tension load N [kN]	Displacements $\Delta\delta_N$ [mm]
Concrete C12/15 – C50/60 (EN 206:2013+A1:2016)	0,30	< 0,3
Clay brick (EN 771-1:2011+A1:2015), Mz 12	0,30	< 0,5
Calcium silicate solid bricks (EN 771-2:2011+A1:2015), KS 12	0,30	< 0,3
Solid concrete blocks (EN 771-3:2011+A1:2015), Vbn 20	0,25	< 0,3
Lightweight concrete solid blocks (EN 771-3:2011+A1:2015), Vbl 8	0,20	< 0,2
Vertically perforated clay brick (EN 771-1:2011+A1:2015), Hlz 12	0,20	< 0,2
Hollow calcium silicate brick (EN 771-2:2011+A1:2015), KSL 20	0,25	< 0,3
Hollow calcium silicate brick (EN 771-2:2011+A1:2015), KSL 12	0,15	< 0,2
Hollow brick lightweight concrete (EN 771-3:2011+A1:2015), Hbl 10	0,20	< 0,2
Lightweight aggregate concrete (EN 1520:2011, EN 771-3:2011+A1:2015)	LAC 6 0,20	< 0,3
	LAC 4 0,13	
Autoclaved aerated concrete blocks (EN 771-4:2011+A1:2015), AAC 4	0,13	< 0,3

**Table C4.3: Displacements BAUFIX TERMOZ CNPlus**

Base material	BAUFIX TERMOZ CN Plus	
	Tension load N [kN]	Displacements $\Delta\delta_N$ [mm]
Concrete C12/15 – C50/60 (EN 206:2013+A1:2016)	0,30	< 0,1
Weather resistant concrete shell $\geq$ C20/25 (EN 206:2013+A1:2016)	0,30	< 0,1
Clay brick (EN 771-1:2011+A1:2015), Mz 20	0,30	< 0,2
Calcium silicate solid bricks (EN 771-2:2011+A1:2015), KS 20	0,30	< 0,2
Solid concrete blocks (EN 771-3:2011+A1:2015), Vbn 20	0,30	< 0,2
Lightweight concrete solid blocks (EN 771-3:2011+A1:2015), Vbl 10	0,25	< 0,1
Vertically perforated clay brick (EN 771-1:2011+A1:2015), Hlz 48	0,25	< 0,2
Vertically perforated clay brick (EN 771-1:2011+A1:2015), Hlz 12	0,17	< 0,1
Hollow calcium silicate brick (EN 771-2:2011+A1:2015), KSL 16	0,17	< 0,1
Hollow brick lightweight concrete (EN 771-3:2011+A1:2015), Hbl 10	0,20	< 0,1
Lightweight aggregate concrete (EN 1520:2011, EN 771-3:2011+A1:2015), LAC 6	0,13	< 0,2
Autoclaved aerated concrete blocks (EN 771-4:2011+A1:2015), AAC 4	0,10	< 0,1

**BAUFIX TERMOZ CN | BAUFIX TERMOZ CNR |  
BAUFIX TERMOZ CNPlus**

**Performance**  
Plate stiffness  
Displacements

**Annex C4**