



## LEISTUNGSERKLÄRUNG

### DoP 0234

für fischer TermoZ CS 8 / fischer TermoZ CS II 8 (Kunststoffdübel für die Befestigung von Wärmedämmverbundsystemen mit Putzschiicht)

DE

1. <u>Eindeutiger Kenncode des Produkttyps:</u>	<b>DoP 0234</b>	
2. <u>Verwendungszweck(e):</u>	<b>Schraubdübel aus Kunststoff für die Befestigung von Wärmedämmverbundsystemen mit Putzschiicht in Beton und Mauerwerk.</b>	
3. <u>Hersteller:</u>	<b>Siehe Anhang, insbesondere die Anhänge B1- B4 fischerwerke GmbH &amp; Co. KG, Klaus-Fischer-Str. 1, 72178 Waldachtal, Deutschland</b>	
4. <u>Bevollmächtigter:</u>	-	
5. <u>AVCP - System/e:</u>	<b>2+</b>	
6. <u>Europäisches Bewertungsdokument:</u>	<b>EAD 330196-01-0604, Edition 07/2017</b>	
<u>Europäische Technische Bewertung:</u>	<b>ETA-14/0372; 2021-03-26</b>	
<u>Technische Bewertungsstelle:</u>	<b>ETA-Danmark A/S</b>	
<u>Notifizierte Stelle(n):</u>	<b>2873 TU Darmstadt</b>	
7. <u>Erklärte Leistung(en):</u>		
<b>Sicherheit bei der Nutzung (BWR 4)</b>		
<u>Charakteristische Tragfähigkeit:</u>	Charakteristischer Widerstand bei Zugbelastung:	Anhänge C1-C4
	Minimaler Randabstand:	Anhänge B2-B3
	Minimaler Achsabstand:	Anhänge B2-B3
<u>Verschiebungen:</u>	Zuglast mit Teilsicherheitsbeiwert: Verschiebungen:	Anhänge C6, C7 Anhänge C6, C7
<u>Tellersteifigkeit:</u>	Durchmesser Dübelteller:	Anhang C6
	Widerstand (Loast) des Dübeltellers:	Anhang C6
	Steifigkeit Dübelteller:	Anhang C6
<b>Energieeinsparung und Wärmeschutz (BWR 6)</b>		
<u>Wärmedurchlässigkeit:</u>	Punktueller Wärmeübertragung des Dübels: Dämmschichtdicke ETICS:	Anhang C5 Anhang C5



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:



Dr. Oliver Geibig, Geschäftsführer Business Units & Engineering  
Tumlingen, 2021-04-05



Jürgen Grün, Geschäftsführer Chemie & Qualität

Diese Leistungserklärung wurde in mehreren Sprachen erstellt. Für alle Streitigkeiten, die sich aus der Auslegung ergeben, ist die Fassung in englischer Sprache maßgeblich.

Der Anhang enthält freiwillige und ergänzende Informationen in englischer Sprache, die über die (sprachneutral festgelegten) gesetzlichen Anforderungen hinausgehen.

## **II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT**

### **1 Technical description of product**

#### **Technical description of the product**

The screwed-in anchor fischer TermoZ CS 8 and fischer TermoZ CS II 8 for fixing of external thermal insulation composite systems (ETICS) consists of an anchor sleeve made of polypropylene with a diameter of 8 mm and an insulation plate made of glass-fiber reinforced polyamide with a diameter of 60 mm. The color of the anchor sleeve is grey. The special compound screw is made of galvanized steel and glass-fiber reinforced polyamide. The anchor is expanded by screwing the screw into the sleeve. It is possible to install the anchor flush or deep-mounted to the surface of the insulation.

The product description is given in Annex A.

### **2 Specification of the intended use in accordance with the applicable European Assessment Document (hereinafter EAD)**

The performances given in Section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B1 to B3

The provisions made in this European Technical Assessment are based on an assumed intended working life of the anchor of 25 years.

The indications given on the working life cannot be interpreted as a guarantee given by the producer or Assessment Body, 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 Characteristics of product**

##### **Safety in case of fire (BWR 2):**

No Performance determined

##### **Safety in use (BWR4):**

The essential characteristics are detailed in the Annex from C1 to C4.

Other Basic Requirements are not relevant.

##### **General aspects**

The verification of durability is part of testing of the essential characteristics. Durability is only ensured if the specifications of intended use according to Annex B are taken into account.

#### **3.2 Methods of assessment**

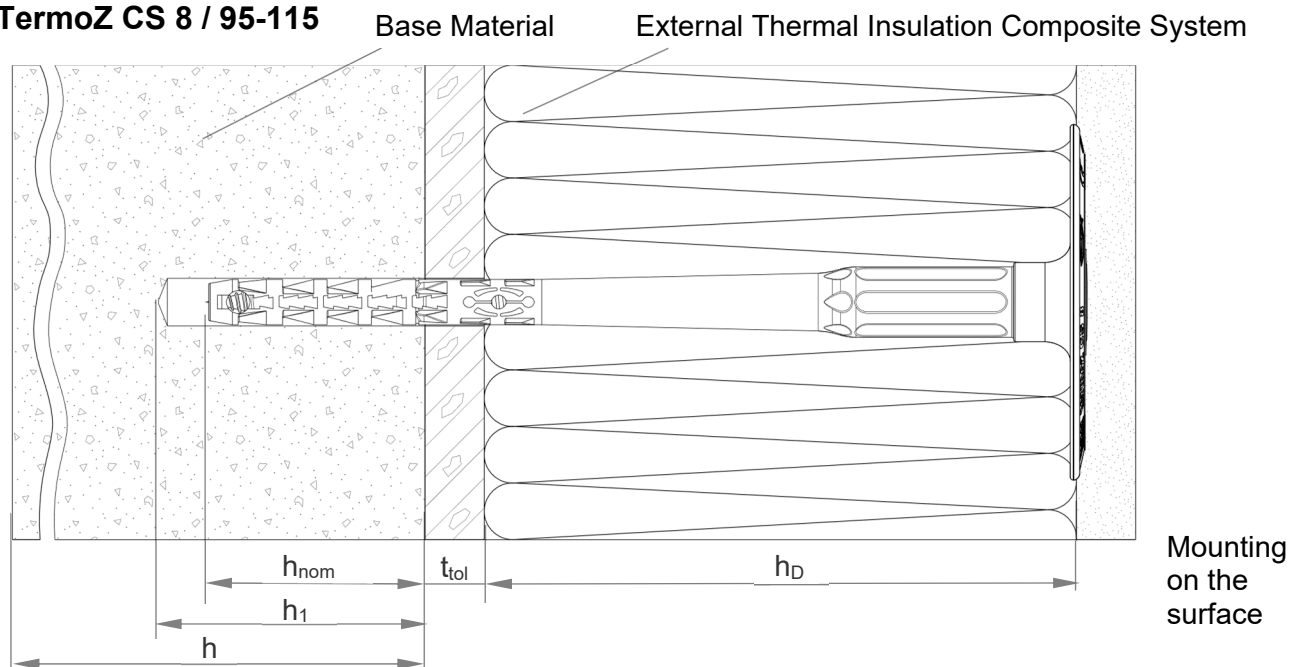
The assessment of fitness of the anchor for the intended use in relation to the requirements for mechanical resistance and stability and safety in use in the sense of the Basic Requirements 4 has been made in accordance with the EAD 330196-01-0604 Plastic anchors made of virgin or non-virgin material for fixing of external thermal insulation composite systems with rendering.

## **4 Assessment and verification of constancy of performance (AVCP)**

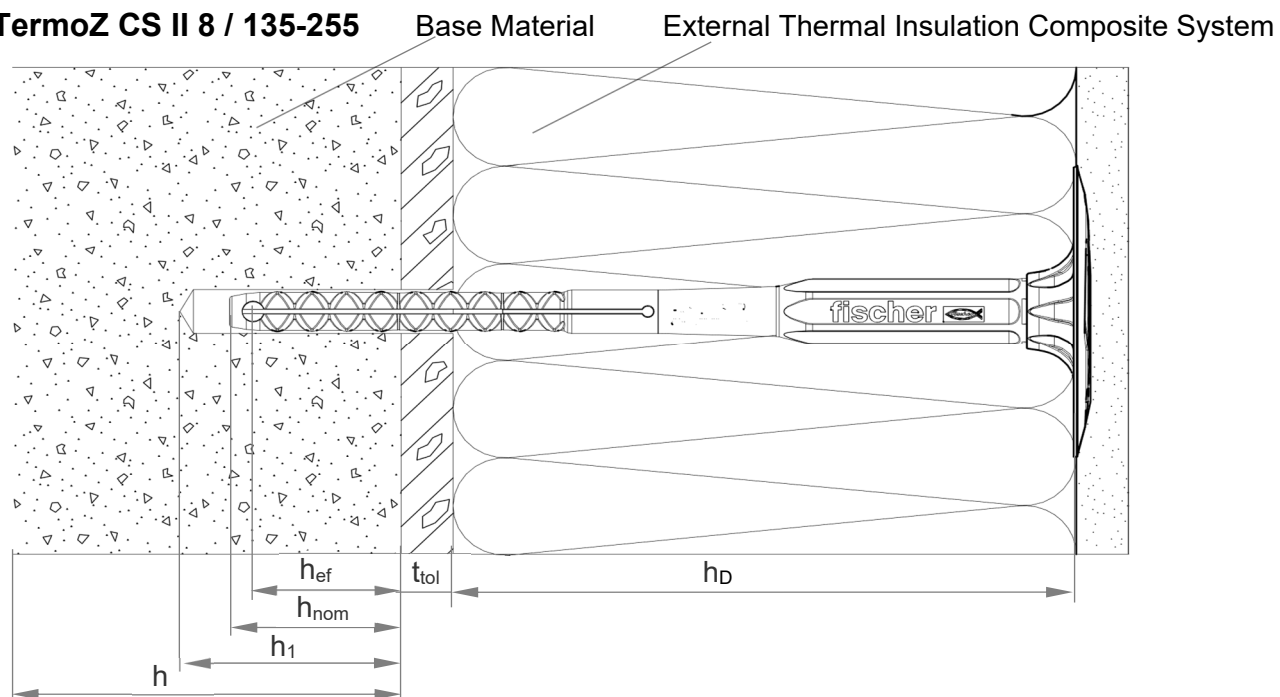
### **4.1 AVCP system**

According to the decision 97/463/EC of the European Commission, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) is 2+.

### TermoZ CS 8 / 95-115



### TermoZ CS II 8 / 135-255



#### Legend

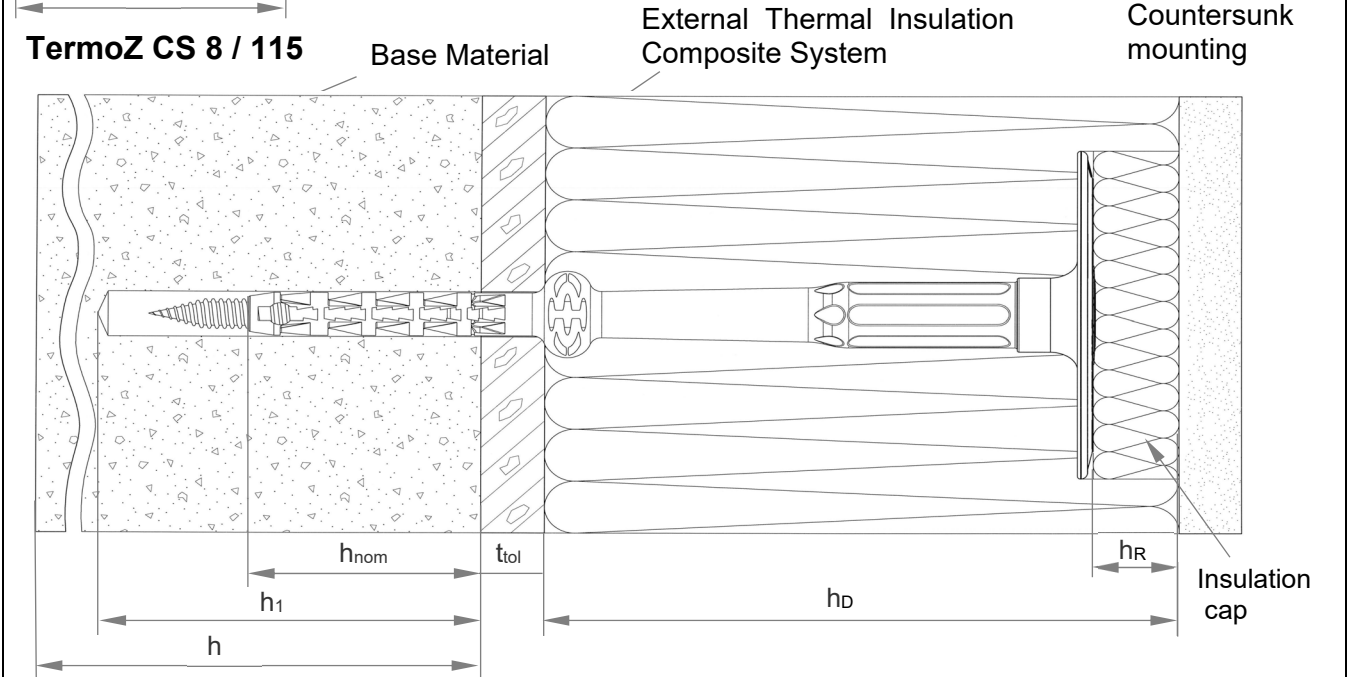
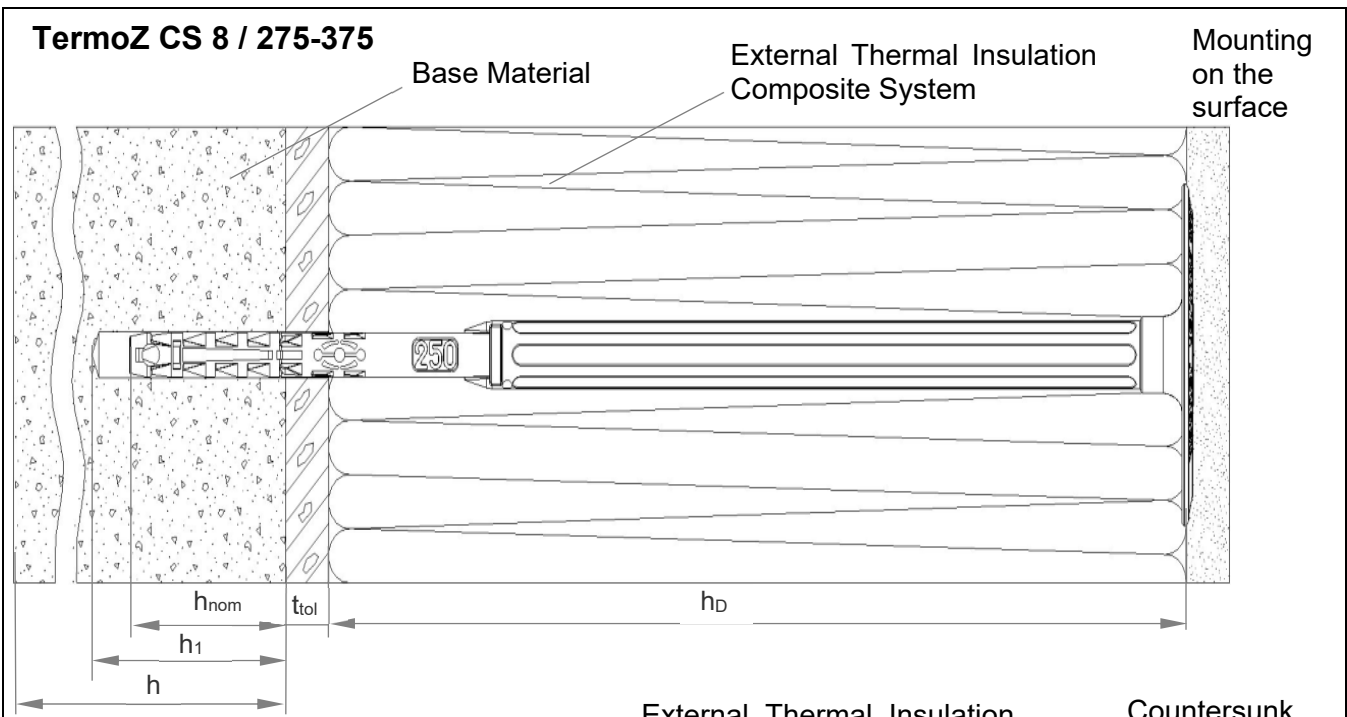
- $h_{nom}$  = Overall plastic anchor embedment depth in the base material
- $h_{ef}$  = Effective anchorage depth in the base material
- $h_1$  = Depth of drilled hole to deepest point
- $h$  = Thickness of member (wall)
- $h_D$  = Thickness of insulation material
- $t_{tol}$  = Thickness of equalising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

Figure not to scale

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Product description - Installed anchor

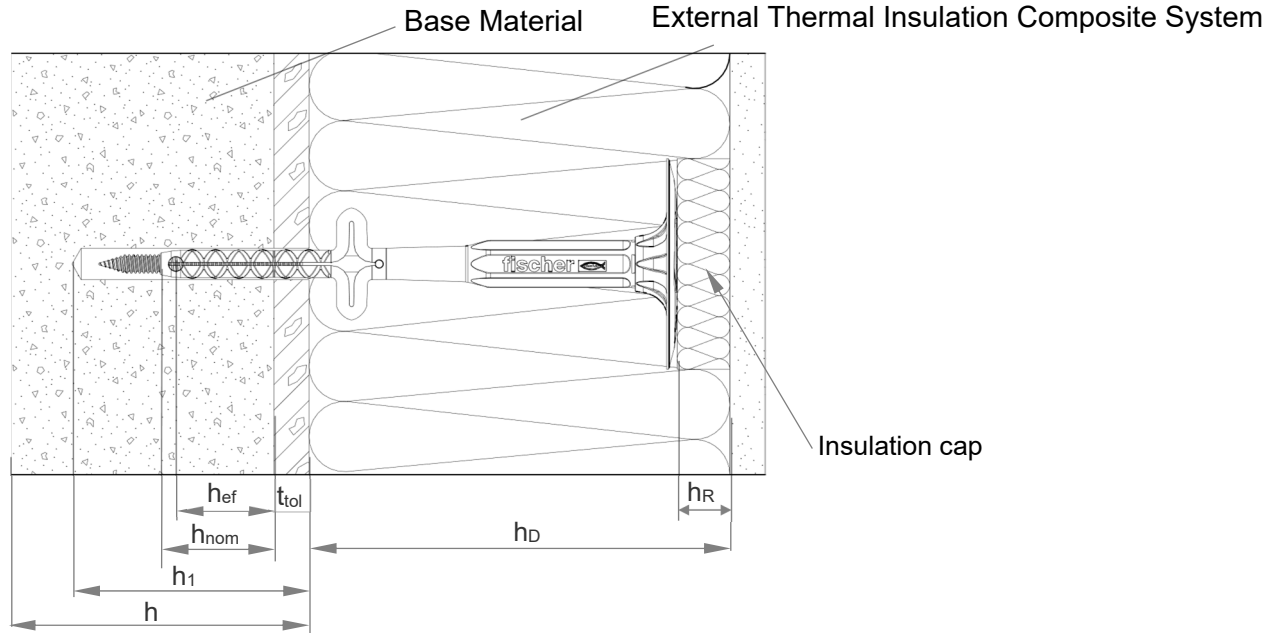
**Annex A1**  
of European  
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- Legend**
- $h_{nom}$  = Overall plastic anchor embedment depth in the base material
  - $h_1$  = Depth of drilled hole to deepest point
  - $h$  = Thickness of member (wall)
  - $h_D$  = Thickness of insulation material
  - $t_{tol}$  = Thickness of equalising layer or non-load bearing coating
  - $h_R$  = Thickness of insulation cap
- Figure not to scale

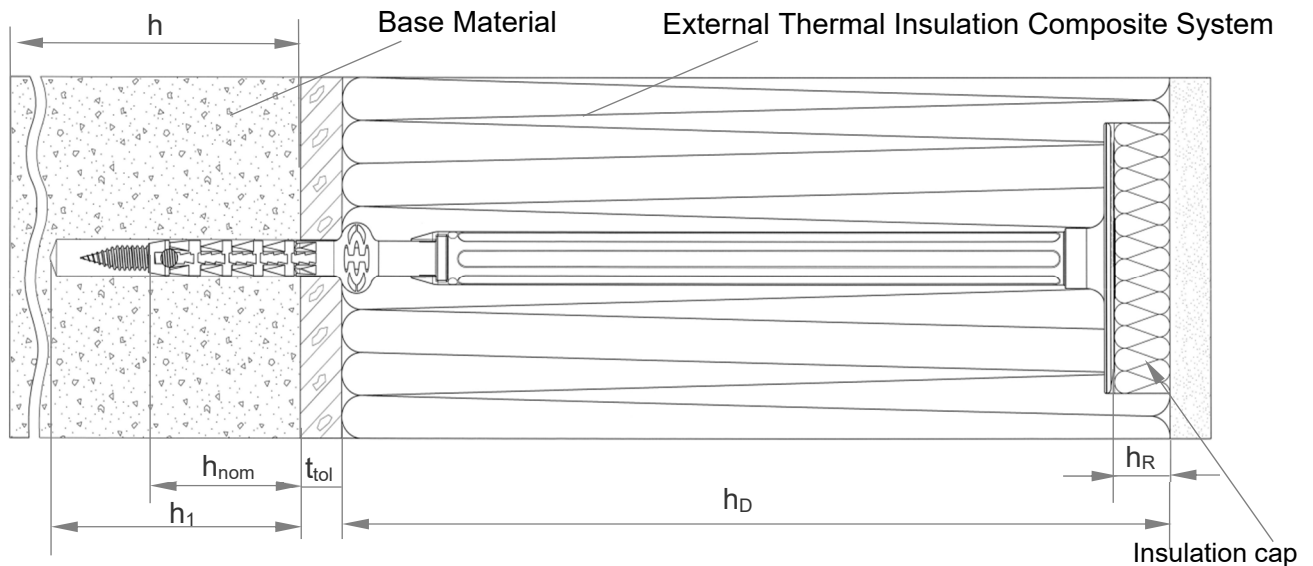
<b>fischer TermoZ CS 8 and fischer TermoZ CS II 8</b>	<b>Annex A2</b> of European Technical Assessment ETA-14/0372
Product description - Installed anchor	

### TermoZ CS II 8 / 135-255



### TermoZ CS 8 / 275-375

contersunk mounting



#### Legend

- $h_{nom}$  = Overall plastic anchor embedment depth in the base material
- $h_{ef}$  = Effective anchorage 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 equalising layer or non-load bearing coating
- $h_R$  = Thickness of insulation cap

Figure not to scale

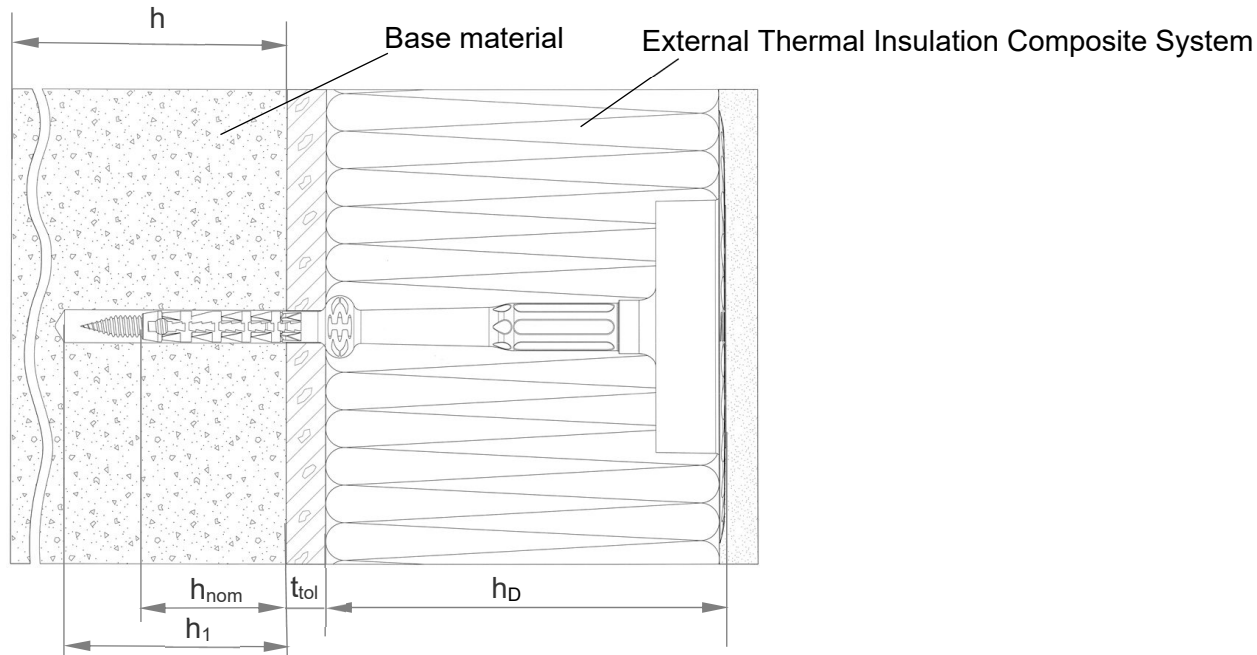
**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Product description - Installed anchor

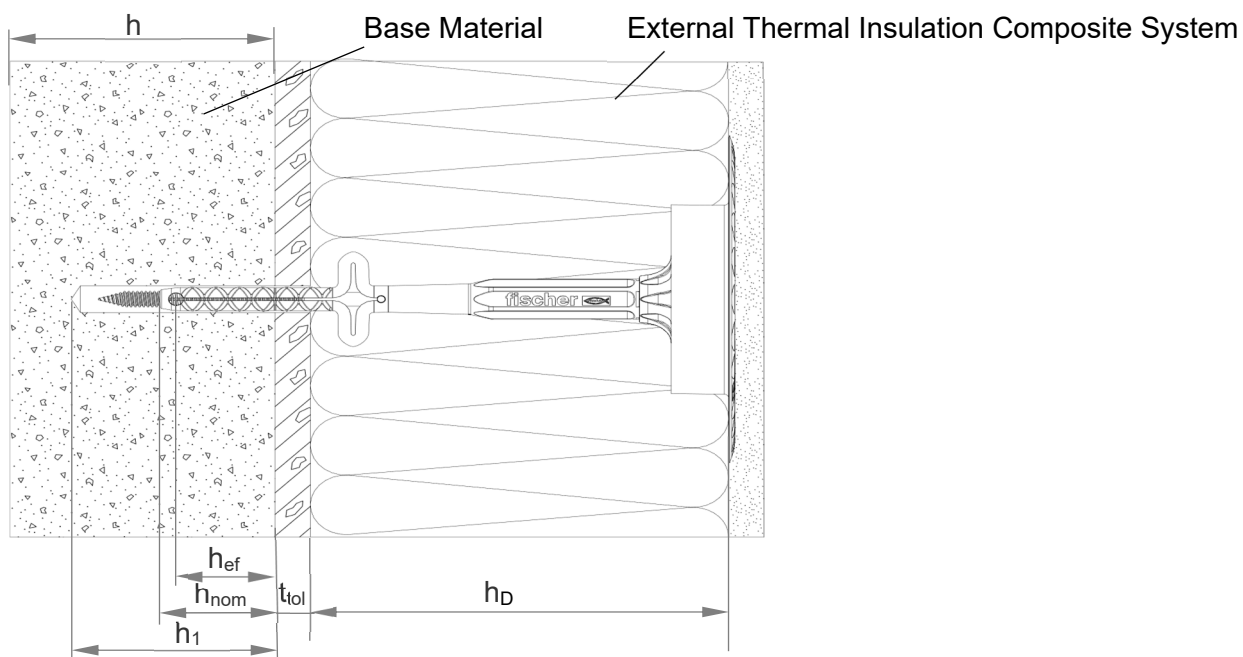
**Annex A3**  
of European  
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### TermoZ CS 8 / 115 DT 110 V



### TermoZ CS II 8 / 135-255 DT 110 V



#### Legend

- $h_{nom}$  = Overall plastic anchor embedment depth in the base material
- $h_{ef}$  = Effective anchorage 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 equalising layer or non-load bearing coating

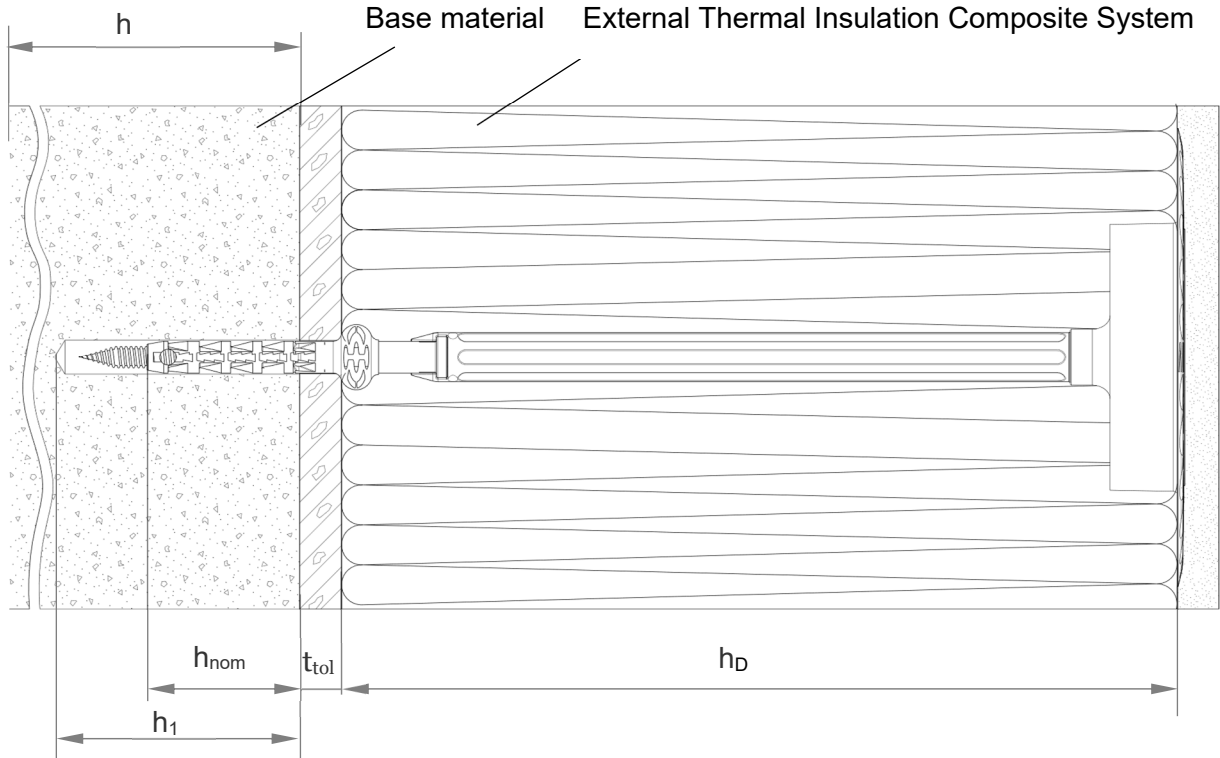
Figure not to scale

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Product description - Installed anchor

**Annex A4**  
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**TermoZ CS 8 / 250-390 DT 110 V**



**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 equalising layer or non-load bearing coating

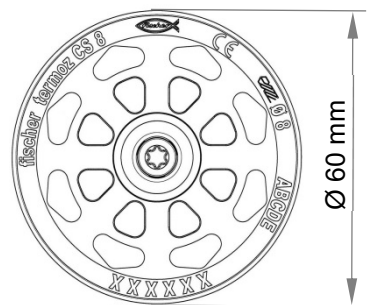
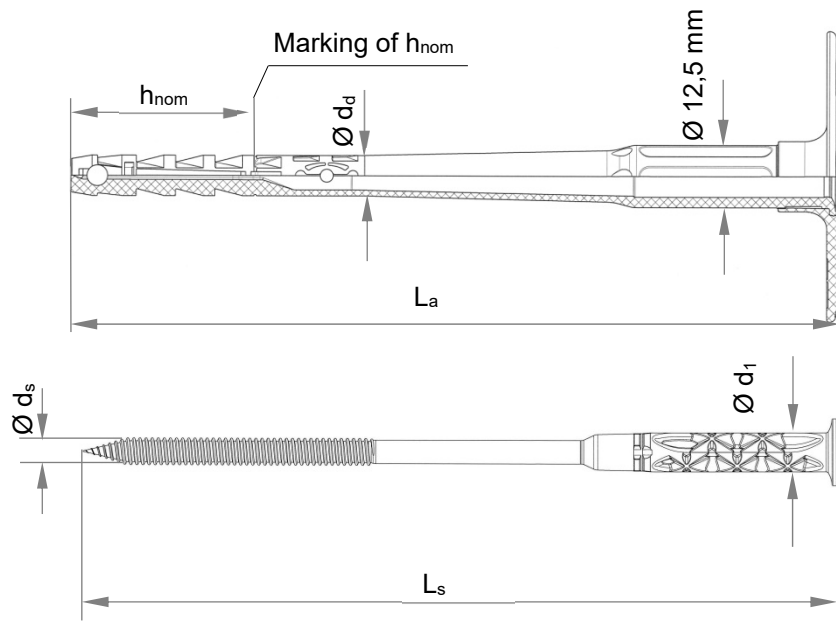
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**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Product description - Installed anchor

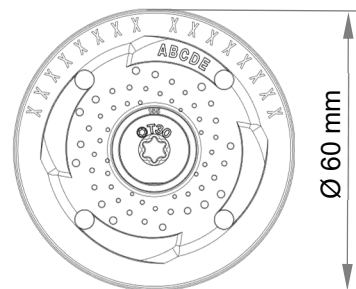
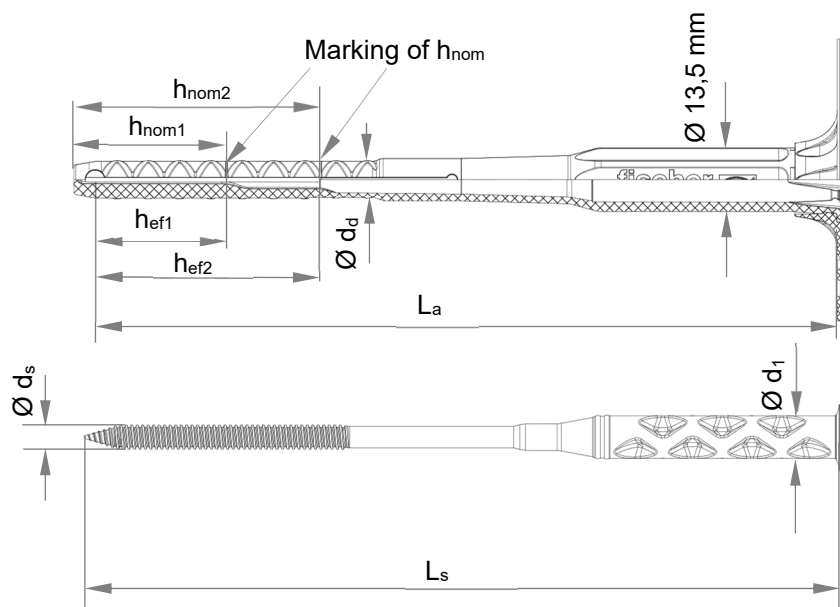
**Annex A5**  
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**Anchor sleeve / Specific screw for TermoZ CS 8 / 95-115**



TermoZ CS 8 / 95-115:  
 $95 \text{ mm} \leq L_a \leq 115 \text{ mm}$   
 Thickness of insulation material:  
 $h_D = 10 \text{ mm} + (L_a - h_{nom} - t_{tol})$

**Anchor sleeve / Specific screw for TermoZ CS II 8 / 135-255**



TermoZ CS II 8 / 135-255:  
 $135 \text{ mm} \leq L_a \leq 255 \text{ mm}$   
 Thickness of insulation material:  
 $h_D = (L_a - h_{ef} - t_{tol})$

Figure not to scale

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

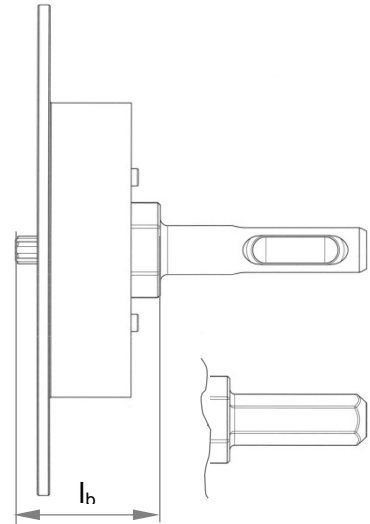
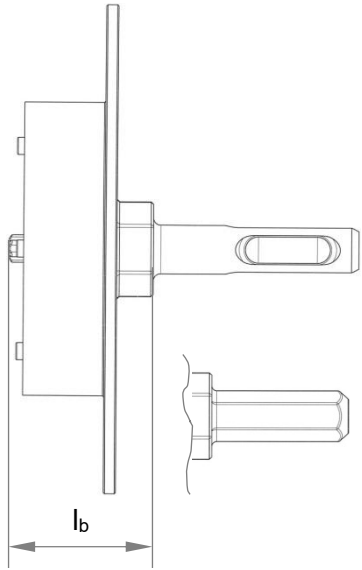
Product description - Dimensions

**Annex A6**  
 of European  
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**Setting tool with SDS adapter or hexagonal adapter available for  
TermoZ CS 8 / 95-115 and TermoZ CS II 8 / 135-255**

**Optional: plain  
surface setting**

**Countersunk setting of anchor**



**Polystyrene or mineral wool caps**

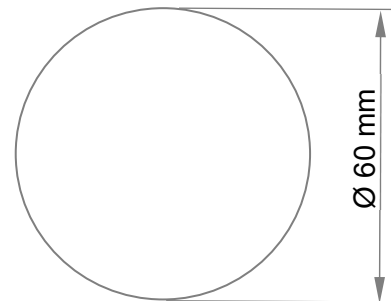


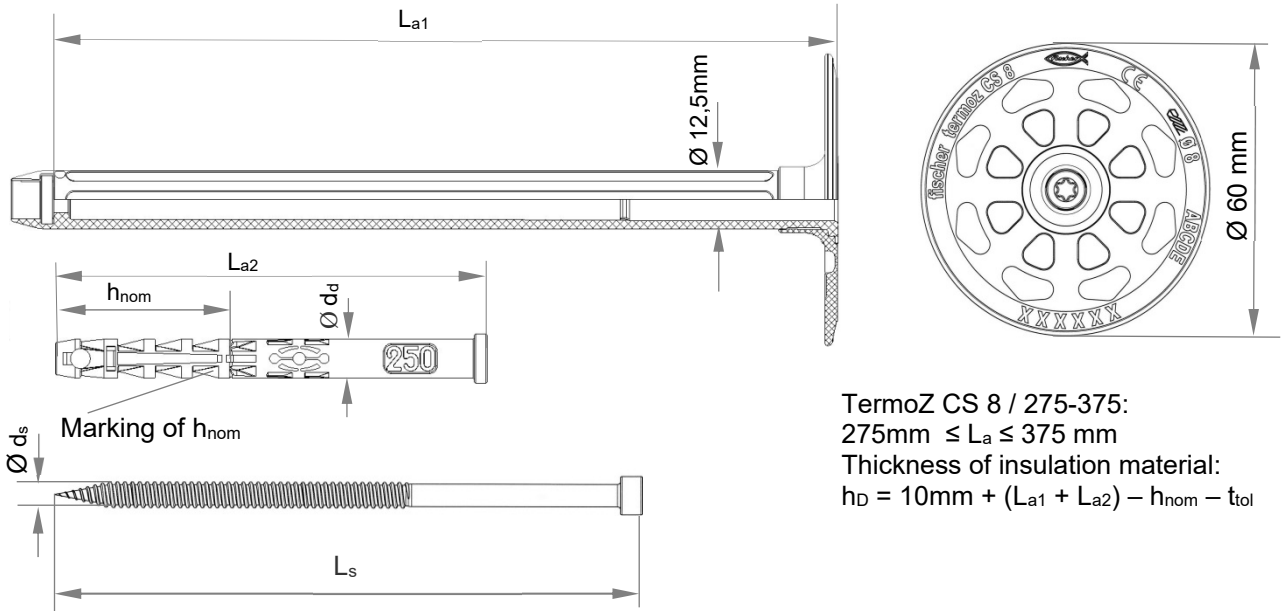
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**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Product description - Dimensions

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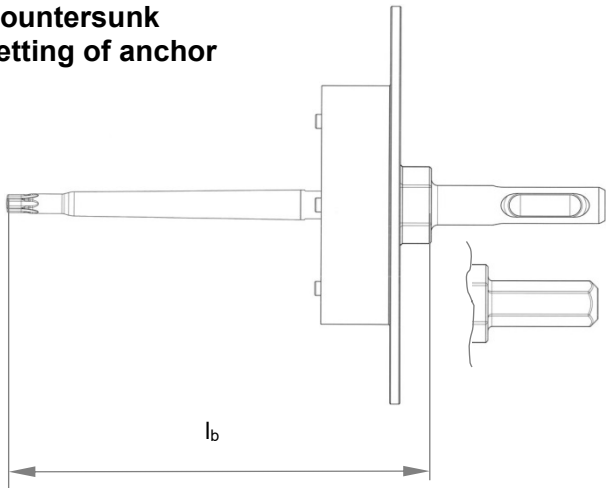
**Shaft / Anchor sleeve / Specific screw for TermoZ CS 8 / 275-375**



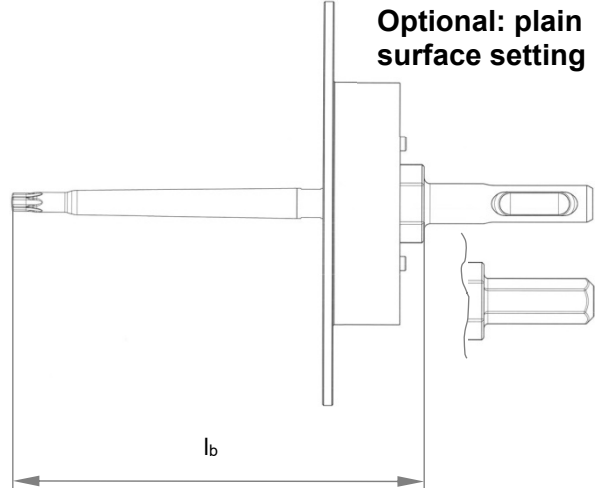
TermoZ CS 8 / 275-375:  
 $275\text{mm} \leq L_a \leq 375\text{mm}$   
 Thickness of insulation material:  
 $h_D = 10\text{mm} + (L_{a1} + L_{a2}) - h_{nom} - t_{tol}$

**Setting tool with SDS adapter or hexagonal adapter available**

**Countersunk setting of anchor**



**Optional: plain surface setting**



**Polystyrene or mineral wool caps**

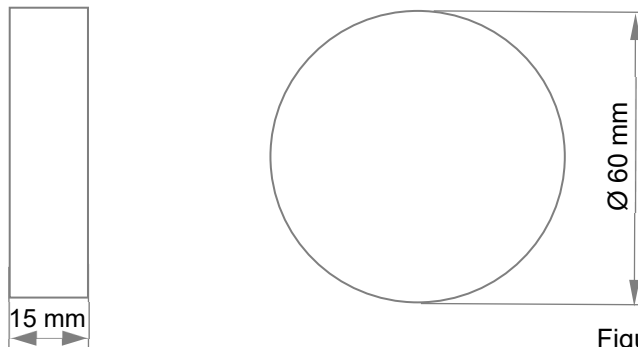


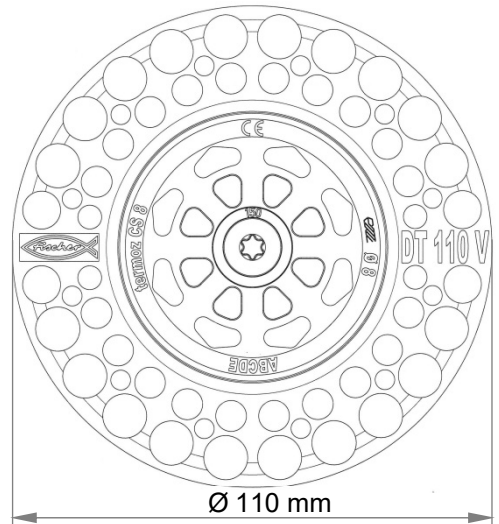
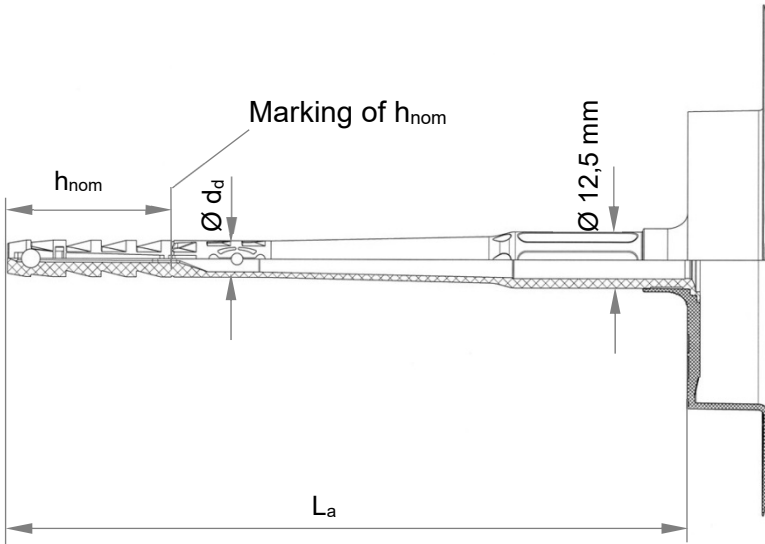
Figure not to scale

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Product description - Dimensions

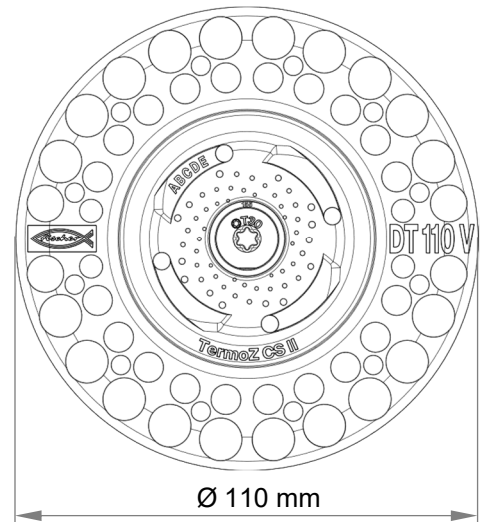
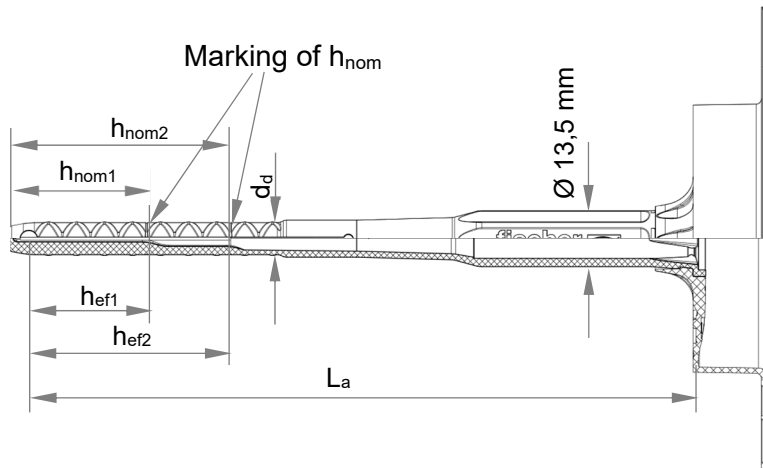
**Annex A8**  
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**TermoZ CS 8 / 115 DT 110 V**



TermoZ CS 8 / 95-115:  
 $95 \text{ mm} \leq L_a \leq 115 \text{ mm}$   
 Thickness of insulation material:  
 $h_D = 10 \text{ mm} + (L_a - h_{nom} - t_{tol})$

**TermoZ CS II 8 / 135-255 DT 110**



TermoZ CS II 8 / 135-255:  
 $135 \text{ mm} \leq L_a \leq 255 \text{ mm}$   
 Thickness of insulation material:  
 $h_D = (L_a - h_{ef} - t_{tol})$

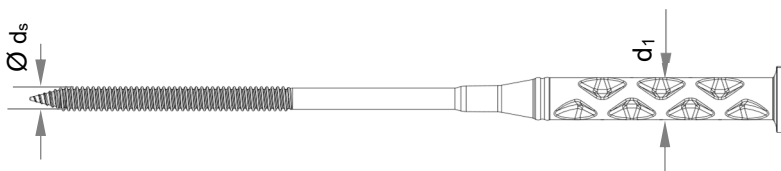


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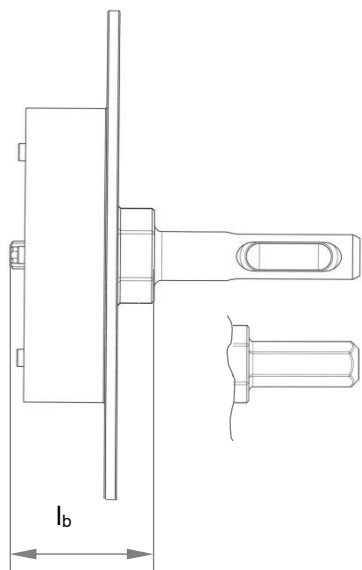
**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Product description - Dimensions

**Annex A9**  
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# TermoZ CS 8 / 115 DT 110 V and TermoZ CS II 8 / 135-255 DT 110 V

Countersunk Setting tool with SDS adapter or hexagonal adapter available



Polystyrene or mineral wool caps

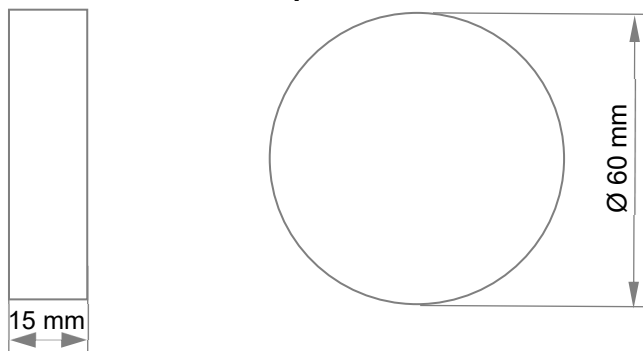


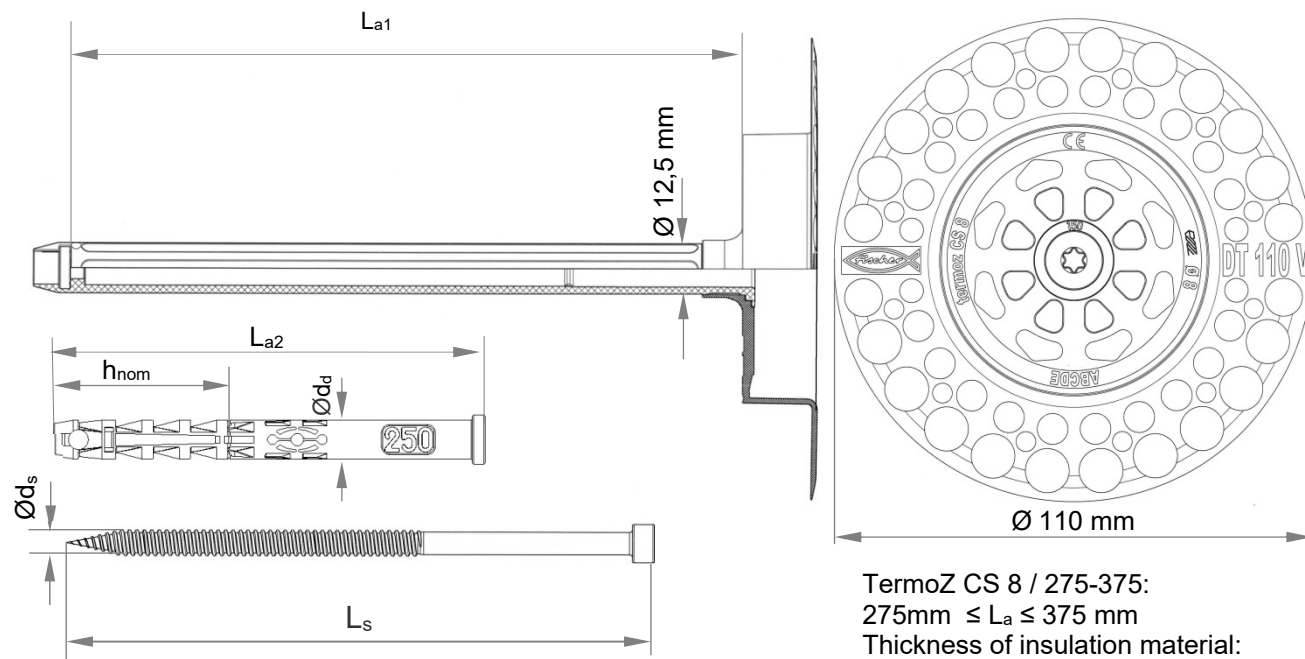
Figure not to scale

fischer TermoZ CS 8 and fischer TermoZ CS II 8

Product description - Dimensions

**Annex A10**  
of European  
Technical Assessment  
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# TermoZ CS 8 / 275-375 DT 110 V



TermoZ CS 8 / 275-375:  
 $275\text{mm} \leq L_a \leq 375\text{mm}$   
 Thickness of insulation material:  
 $h_D = 10\text{mm} + (L_{a1} + L_{a2}) - h_{nom} - t_{tol}$

Countersunk Setting tool with SDS adapter or hexagonal adapter available

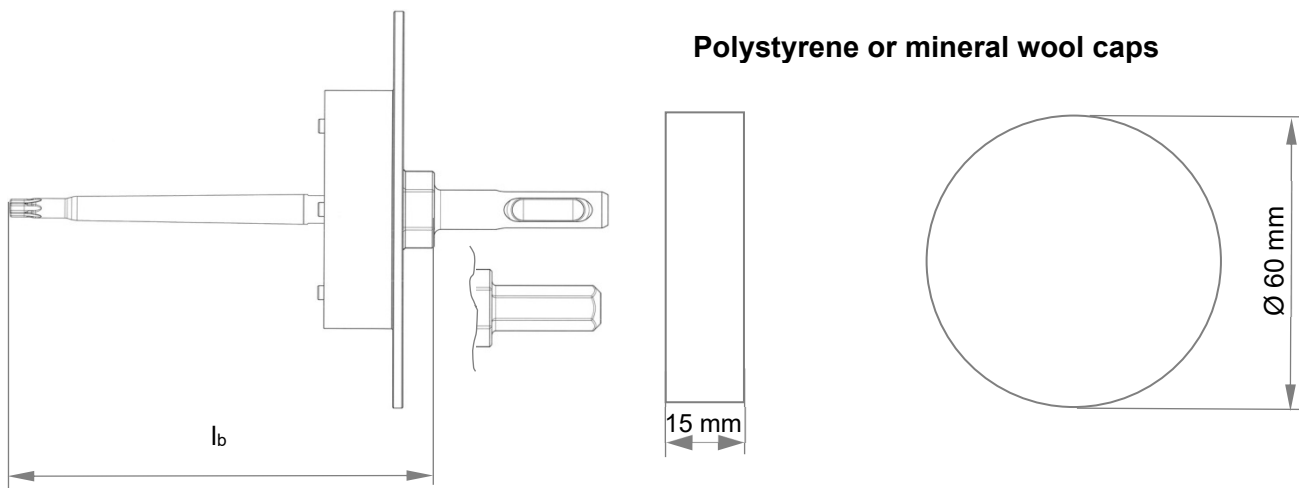


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fischer TermoZ CS 8 and fischer TermoZ CS II 8

Product description - Dimensions

**Annex A11**  
 of European  
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**Table A12.1: Slip-on plates, diameters and material**

	Designation
Name and size of anchor	TermoZ CS 8 / TermoZ CS II 8
Example	fischer TermoZ CS 8  (optional) CE  (optional) Ø 8 ABCDE (optional) and xxxxx additional marks possible fischer TermoZ CS II 8  (optional) CE  (optional) Ø 8 ABCDE (optional) and xxxxx additional marks possible

**Table A12.2: Dimensions [mm]**

Anchor type	Anchor sleeve			Shaft		Specific screw			Length of bits l <sub>b</sub>	
	Ø d <sub>d</sub>	h <sub>nom</sub>	h <sub>ef</sub>	L <sub>a</sub>	(L <sub>a1</sub> +L <sub>a2</sub> )	Ø d <sub>s</sub>	l <sub>s</sub>	Ø d <sub>1</sub>	l <sub>b</sub> [mm]	size
TermoZ CS 8 95-115	8	35	-	95-115	-	5,4	L <sub>a</sub> + 10 mm	8	30	T30
TermoZ CS II 8 135-255	8	32,5	25	135-255	-	5,4	L <sub>a</sub> + 10 mm	9,5	30	T30
		52,5	45							
TermoZ CS 8 Renovation type 275-295	8	35	-	-	275-295	5,4	(L <sub>a1</sub> + L <sub>a2</sub> ) – 60 mm	-	100	T25
TermoZ CS 8 315-375	8	35	-	-	315-375	5,4	(L <sub>a1</sub> + L <sub>a2</sub> ) – 140 mm	-	180	T25

**Table A12.3: Dimensions [mm]**

Anchor type	Anchor sleeve			Shaft		Specific screw			Length of bits l <sub>b</sub>	
	Ø d <sub>d</sub>	h <sub>nom</sub>	h <sub>ef</sub>	L <sub>a</sub>	(L <sub>a1</sub> +L <sub>a2</sub> )	Ø d <sub>s</sub>	l <sub>s</sub>	Ø d <sub>1</sub>	l <sub>b</sub> [mm]	size
TermoZ CS 8 115 DT 110 V	8	35	-	115	-	5,4	L <sub>a</sub> + 10 mm	8	30	T30
TermoZ CS II 8 135-255 DT110 V	8	32,5	25	135-255	-	5,4	L <sub>a</sub> + 10 mm	9,5	30	T30
		52,5	45							
TermoZ CS 8 Renovation type 275-295 DT110 V	8	35	-	-	275-295	5,4	(L <sub>a1</sub> + L <sub>a2</sub> ) – 60 mm	-	100	T25
TermoZ CS 8 315-375 DT 110 V	8	35	-	-	315-375	5,4	(L <sub>a1</sub> + L <sub>a2</sub> ) – 140 mm	-	180	T25

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

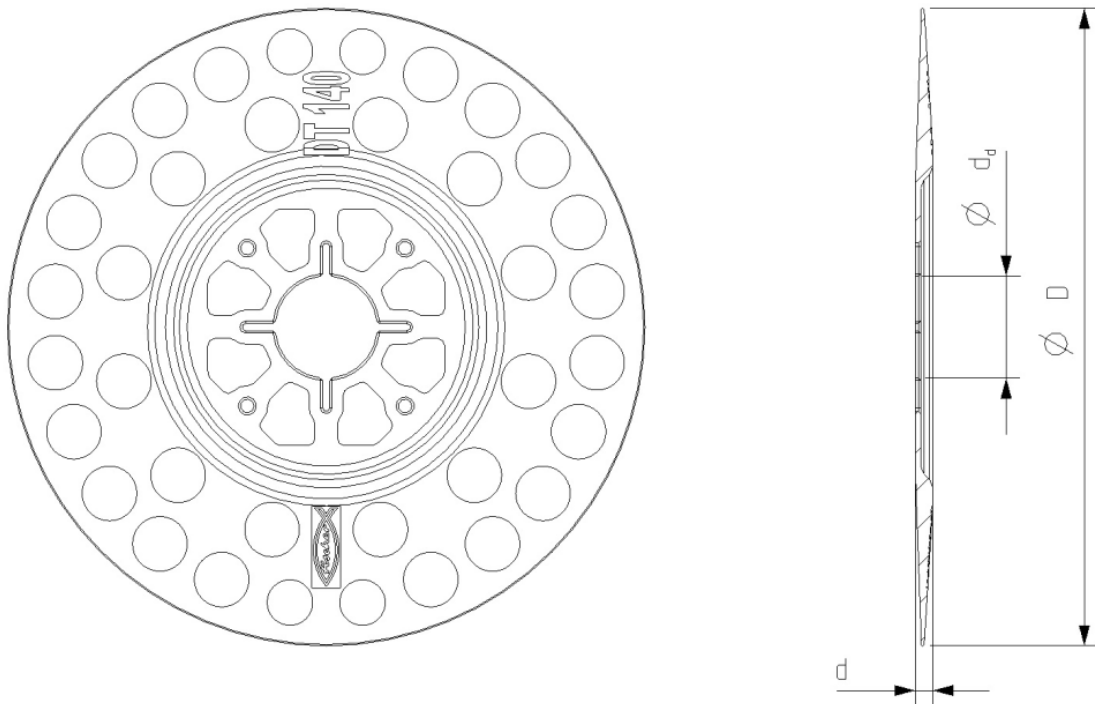
Product description – Dimensions and materials

**Annex A12**  
of European  
Technical  
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**Table A13.1: Materials**

Designation	Material
Anchor sleeve	PP colour: grey
Shaft (TermoZ CS 8 / 275-375)	PA6 GF colour: grey
Specific compound screw (TermoZ CS 8 95-115) or specific screw (TermoZ CS 8 / 275-375) or specific compound screw (TermoZ CS II 8 135-255)	PA6 GF with Steel gal Zn A2G or A2F acc. to EN ISO 4042:2018-11 Steel gal Zn5-Ag or Zn5-An acc. to EN ISO 4042:2018-11 or stainless steel 1.4362 duplex coating, 1.4401, 1.4571, 1.4529 acc. to EN 10088:2014-12
Anchor plate	PA6 GF colour: grey, blue, green, orange, red, yellow, mocca-latte

**Drawing of the slip-on plates (e.g. DT 140)**



**Table A13.2: Slip-on plates, diameters and material**

Slip-on plate	Ø D [mm]	Ø d <sub>d</sub> [mm]	d [mm]	Material
DT 90 / DT 110 / DT 140	90 / 110 / 140	22,5	3,9	PA 6 GF

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Product description – Material and Slip-on plates

**Annex A13**  
of European  
Technical  
Assessment  
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## 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:

- Normal weight concrete (base material group A) according to Annex C1 and C3.
- Solid masonry (base material group B), according to Annex C1 and C3.
- Hollow or perforated masonry (base material group C), according to Annex C1, C2, C3 and C4.
- Lightweight aggregate concrete (base material group D), according to Annex C2 and C4.
- Autoclaved aerated concrete (base material group E), according to Annex C2 and C4.
- For other base materials of the base material groups A, B, C, D and E the characteristic resistance of the anchor may be determined by job site tests according 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) of the base material

### Design:

- The anchorages are designed under the responsibility of an engineer experienced in anchorages and masonry work with the partial safety factors  $g_M = 2,0$  and  $g_F = 1,5$  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 thermal insulation composite systems.

### Installation:

- Drilling method according to Annex C1 to C4.
- 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 CS 8 and fischer TermoZ CS II 8**

Intended use - Specifications

**Annex B1**  
of European  
Technical  
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**Table B2.1: Installation parameters for base material groups A, B, C and D**

Anchor type		TermoZ CS 8/95-115 and 275-375	
		Flush	Countersunk
Nominal drill hole diameter	$d_0 =$ [mm]	8	8
Cutting diameter of drill bit	$d_{cut} \leq$ [mm]	8,45	8,45
Depth of drill hole to deepest point	$h_1 \geq$ [mm]	45 / 55 <sup>1)</sup>	60 / 70 <sup>1)</sup>
Overall plastic anchor embedment depth in the base material	$h_{nom} \geq$ [mm]	35 / 45 <sup>1)</sup>	35 / 45 <sup>1)</sup>

<sup>1)</sup> only valid for weather shell acc. to Annex C1

**Table B2.2: Installation parameters for base material group “C” only valid for the tested masonry units**

Anchor type		TermoZ CS 8/95-115 and 275-375	
		Flush	Countersunk
Nominal drill hole diameter	$d_0 =$ [mm]	8	8
Cutting diameter of drill bit	$d_{cut} \leq$ [mm]	8,45	8,45
Depth of drill hole to deepest point	$h_1 \geq$ [mm]	35	50
Overall plastic anchor embedment depth in the base material	$h_{nom} \geq$ [mm]	25	25

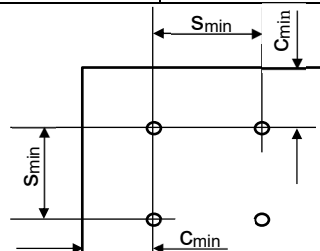
**Table B2.3: Installation parameters for base material group “E”**

Anchor type		TermoZ CS 8/95-115 and 275-375	
		Flush	Countersunk
Nominal drill hole diameter	$d_0 =$ [mm]	8	8
Cutting diameter of drill bit	$d_{cut} \leq$ [mm]	8,45	8,45
Depth of drill hole to deepest point	$h_1 \geq$ [mm]	65	80
Overall plastic anchor embedment depth in the base material	$h_{nom1} \geq$ [mm]	65	80
Depth of drill hole to deepest point	$h_2 \geq$ [mm]	35	35
Overall plastic anchor embedment depth in the base material	$h_{nom2} \geq$ [mm]	55	55

**Table B2.4: Anchor distances and dimensions of members**

Anchor type		TermoZ CS 8/95-115 and 275-375
Minimum thickness of member	$h^{1)}$ $\geq$ [mm]	100
Minimum spacing	$s_{min} =$ [mm]	100
Minimum edge distance	$c_{min} =$ [mm]	100

<sup>1)</sup> not valid for weather shells acc. to Annex C1

**Scheme of distances and spacing**

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Installation parameters for use categories

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**Table B3.1: Installation parameters for base material groups A, B, C, D and E**

Anchor type		TermoZ CS II 8/135-255	
		Flush	Countersunk
Nominal drill hole diameter	$d_0 =$ [mm]	8	8
Cutting diameter of drill bit	$d_{cut} \leq$ [mm]	8,45	8,45
Depth of drill hole to deepest point	$h_1 \geq$ [mm]	40	55
Overall plastic anchor embedment depth in the base material	$h_{nom} \geq$ [mm]	32,5	32,5
Effective plastic anchorage depth	$h_{ef} \geq$ [mm]	25	25

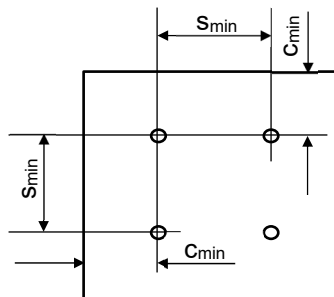
**Table B3.2: Installation parameters alternative option for base material group “E” for higher loads**

Anchor type		TermoZ CS II 8/135-255	
		Flush	Countersunk
Nominal drill hole diameter	$d_0 =$ [mm]	8	8
Cutting diameter of drill bit	$d_{cut} \leq$ [mm]	8,45	8,45
Depth of drill hole to deepest point	$h_1 \geq$ [mm]	60	75
Overall plastic anchor embedment depth in the base material	$h_{nom} \geq$ [mm]	52,5	52,5
Effective plastic anchorage depth	$h_{ef} \geq$ [mm]	45	45

**Table B3.3: Anchor distances and dimensions of members**

Anchor type		TermoZ CS II 8/135-255
Minimum thickness of member	$h \geq$ [mm]	100
Minimum spacing	$s_{min} =$ [mm]	100
Minimum edge distance	$c_{min} =$ [mm]	100

**Scheme of distances and spacing**



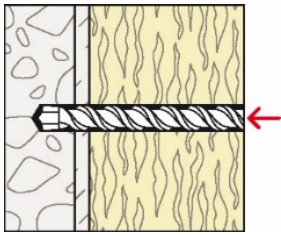
**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Installation parameters for use categories

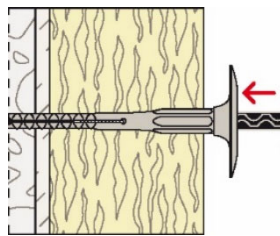
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## Installation instructions for TermoZ CS 8 and CS II 8

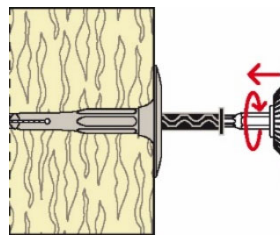
### Standard setting of anchor (plain surface setting)



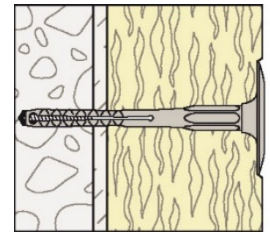
1. Drill hole by corresponding drilling method



2. Insert anchor manually

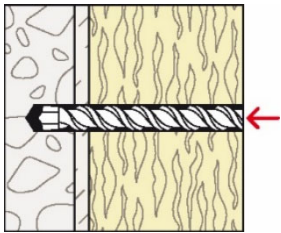


3. Set anchor by machine

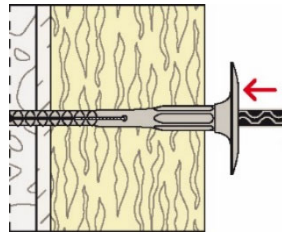


4. Correctly installed anchor

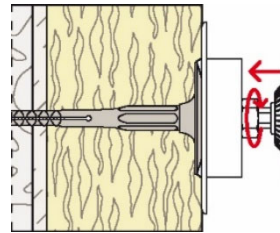
### Setting of anchor (plain surface setting) by setting tool



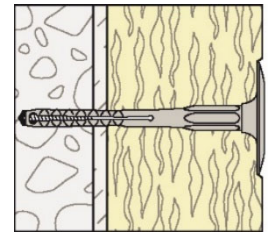
1. Drill hole by corresponding drilling method



2. Insert anchor manually

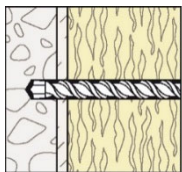


3. Set anchor by setting tool with the machine

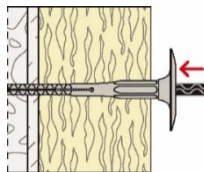


4. Correctly installed anchor

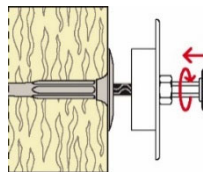
### Setting of anchor (countersunk) by setting tool



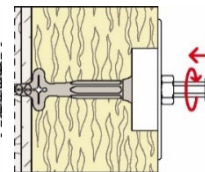
1. Drill hole by corresponding drilling method



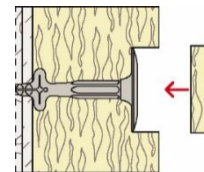
2. Insert anchor manually



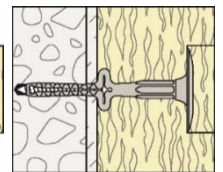
3. Put on setting tool



4. Set anchor by setting tool with the machine

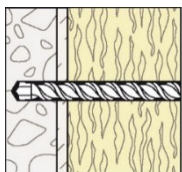


5. Put on polystyrene or mineral wool cap

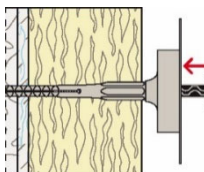


6. Correctly installed anchor

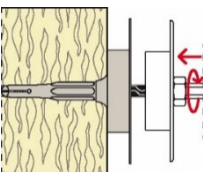
### Setting of DT 110 V anchor by setting tool



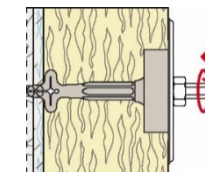
1. Drill hole by corresponding drilling method



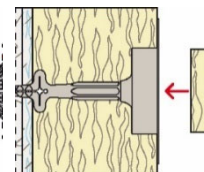
2. Insert anchor manually



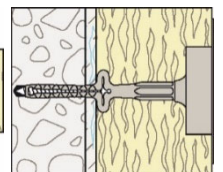
3. Put on setting tool



4. Set anchor by setting tool with the machine



5. Put on polystyrene or mineral wool cap



6. Correctly installed anchor

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Installation procedure

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**Table C1.1: Characteristic resistance to tension loads  $N_{Rk}$  in concrete and masonry for a single anchor in kN / TermoZ CS 8 / 95-115 and 275-375 for base material groups A, B and C**

Base material	Group	Bulk density class $\rho$ [kg/dm <sup>3</sup> ]	Minimum compressive strength $f_b$ [N/mm <sup>2</sup> ]	Remarks	Drill mode <sup>1)</sup>	Characteristic resistance TermoZ CS 8 $N_{Rk}$ [kN]		
Concrete ≥ C12/15 to < C50/60	A	EN 206-1:2000		-	H	1,2		
Concrete C50/60						1,5		
Weather resistant concrete shell ≥ C20/25	A			h ≥ 42 mm	H	1,2		
Weather resistant concrete shell C50/60				h ≥ 42 mm		1,5		
Solid Clay bricks e.g. acc. to EN 771-1:2015, Mz	B			≥ 1,8	20	Cross section reduced up to 15% by perforation vertically to the resting area	H	1,5
Calcium silicate solid bricks, e.g. acc. to EN 771-2:2015, KS	B			≥ 1,8	20	Cross section reduced up to 15% by perforation vertically to the resting area	H	1,5
		12	0,9					
Solid lightweight concrete block, e.g. acc. to EN 771-3:2015 Vbl	B	≥ 1,4	8	Cross section reduced up to 15% by perforation vertically to the resting area	H	0,5		
Solid concrete block, e.g. acc. to EN 771-3:2015, Vbn	B	≥ 2,0	20	Cross section reduced up to 15% by perforation vertically to the resting area	H	1,2		
			12			0,75		
Vertically perforated clay bricks e.g. acc. to EN 771-1:2015, HLz	C <sup>2)</sup>	≥ 1,0	12	Cross section reduced between 15% and 50% by perforation vertically to the resting area. Exterior web thickness ≥ 12 mm	R	0,6		
			48			1,5		
Hollow calcium silicate brick, acc. to EN 771-2:2015, KSL	C <sup>2)</sup>	≥ 1,4	20	Cross section reduced between 15% and 50% by perforation vertically to the resting area. Exterior web thickness ≥ 23 mm	H	0,9		
			12			0,5		

1) H = Hammer drilling, R = Rotary drilling

2) Cat. "C" values valid for reduced anchorage depth 25 mm see Annex B2 Table B2.2

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Intended use - Characteristic resistance of the anchor

**Annex C1**  
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**Table C2.1: Characteristic resistance to tension loads  $N_{Rk}$  in masonry and aerated concrete for a single anchor in kN / TermoZ CS 8/95-115 and 275-375 for base material groups C, D and E**

Base material	Group	Bulk density class $\rho$ [kg/dm <sup>3</sup> ]	Minimum compressive strength $f_b$ [N/mm <sup>2</sup> ]	Remarks	Drill mode <sup>1)</sup>	Characteristic resistance TermoZ CS 8 $N_{Rk}$ [kN]
Hollow brick lightweight concrete, e.g. acc. to EN 771-3:2015 Hbl	C <sup>2)</sup>	≥ 0,9	4	Exterior web thickness ≥ 20 mm	H	<b>0,5</b>
Hollow brick concrete, e.g. acc. to EN 771-3:2015 Hbn	C <sup>2)</sup>	≥ 1,2	10	Exterior web thickness ≥ 38 mm	H	<b>1,2</b>
			8			<b>0,9</b>
			6			<b>0,75</b>
			4			<b>0,5</b>
Lightweight Aggregate Concrete ≥ LAC 6	D	≥ 0,9	6	EN 1520:2011-06	H	<b>0,75</b>
Autoclaved aerated concrete blocks, e.g. AAC acc. to EN 771-4:2015 $h_{nom} = 35mm$	E	≥ 0,50	4		R	<b>0,3</b>
Autoclaved aerated concrete blocks, e.g. AAC acc. to EN 771-4:2015 $h_{nom} = 55 mm$						<b>0,6</b>

1) H = Hammer drilling, R = Rotary drilling

2) Cat. "C" values valid for reduced anchorage depth 25 mm see Annex B2 Table B2.2

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Performance - Characteristic resistance of the anchor

**Annex C2**  
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**Table C3.1: Characteristic resistance to tension loads  $N_{Rk}$  in concrete and masonry for a single anchor in kN / TermoZ CS II 8/135-255 for base material groups A, B and C**

Base material	Group	Bulk density class $\rho$ [kg/dm <sup>3</sup> ]	Minimum compressive strength $f_b$ [N/mm <sup>2</sup> ]	Remarks	Drill mode <sup>1)</sup>	Characteristic resistance TermoZ CS II 8 $N_{Rk}$ [kN]
Concrete $\geq$ C12/15 to $\leq$ C50/60	A	-		EN 206-1:2000	H	1,5
Weather resistant concrete shell $\geq$ C20/25	A	-	-	EN 206-1:2000 ; $h \geq 40$ mm	H	1,5
Solid Clay bricks e.g. acc. to EN 771-1:2015, Mz	B	$\geq 1,8$	20	Cross section reduced up to 15% by perforation vertically to the resting area	H	1,5
Calcium silicate solid bricks, e.g. acc. to EN 771-2:2015, KS	B	$\geq 1,4$	20	Cross section reduced up to 15% by perforation vertically to the resting area	H	1,5
			12			
Solid lightweight concrete block, e.g. acc. to EN 771-3:2015, Vbl	B	$\geq 1,4$	8	Cross section reduced up to 15% by perforation vertically to the resting area	H	1,2
Solid concrete block, e.g. acc. to EN 771-3:2015, Vbn	B	$\geq 2,0$	20	Cross section reduced up to 15% by perforation vertically to the resting area	H	1,5
			12			
Vertically perforated clay bricks, e.g. acc. to EN 771-1:2015, HLz	C	$\geq 0,9$	12	Cross section reduced between 15% and 50% by perforation vertically to the resting area.	R	1,0
			12		H	0,65
		$\geq 1,6$	48	Exterior web thickness $\geq 12$ mm	R	1,5
			48		H	1,5
Hollow calcium silicate brick, e.g. acc. to EN 771-2:2015, KSL	C	$\geq 1,4$	12	Cross section reduced between 15% and 50% by perforation vertically to the resting area. Exterior web thickness $\geq 16$ mm	H	1,5

<sup>1)</sup> H = Hammer drilling, R = Rotary drilling

<b>fischer TermoZ CS 8 and fischer TermoZ CS II 8</b>	<b>Annex C3</b> of European Technical Assessment ETA-14/0372
Performance - Characteristic resistance of the anchor	

**Table C4.1: Char. resistance to tension loads  $N_{Rk}$  in masonry and aerated concrete for a single anchor in kN / TermoZ CS II 8/135-255 for base material groups C, D and E**

Base material	Group	Bulk density class $\rho$ [kg/dm <sup>3</sup> ]	Minimum compressive strength $f_b$ [N/mm <sup>2</sup> ]	Remarks	Drill mode <sup>1)</sup>	Characteristic resistance TermoZ CS II 8 $N_{Rk}$ [kN]
Hollow brick lightweight concrete, e.g. acc. to EN 771-3:2015, Hbl	C	$\geq 0,9$	4	Exterior web thickness $\geq 16$ mm	H	<b>0,5</b>
Hollow brick concrete, e.g. acc. to EN 771-3:2015, Hbn	C	$\geq 1,2$	10	Exterior web thickness $\geq 38$ mm	H	<b>1,5</b>
			8			<b>1,5</b>
			6			<b>1,1</b>
			4			<b>0,75</b>
Lightweight Aggregate Concrete $\geq$ LAC 4	D	$\geq 0,9$	6	EN 1520:2011-06	H	<b>1,5</b>
			4			<b>0,95</b>
Autoclaved aerated concrete blocks, e.g. AAC acc. to EN 771-4:2015 $h_{nom} = 32,5$ mm	E	$\geq 0,50$	4		R	<b>0,65</b>
Autoclaved aerated concrete blocks, e.g. AAC acc. to EN 771-4:2015 $h_{nom} = 52,5$ mm	E					<b>1,1</b>

<sup>1)</sup> H = Hammer drilling, R = Rotary drilling

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Performance - Characteristic resistance of the anchor

**Annex C4**  
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**Table C5.1: Point thermal transmittance acc. to EOTA Technical Report TR 025:2016-05**

<b>Anchor type TermoZ CS 8</b>	<b>Thickness of insulation material h<sub>D</sub> [mm]</b>	<b>Point thermal transmittance χ [W/K]</b>
TermoZ CS 8 / 95 – 115 flush mounted	60 - 80	0,001
TermoZ CS 8 / 315 – 375 flush mounted	280 - 340	0,001
TermoZ CS 8 / 275 – 295 Renovation type flush mounted	240 - 260	0,002
TermoZ CS 8 / 115 countersunk mounted	80	0,001
TermoZ CS 8 / 315 – 375 countersunk mounted	280 - 340	0,001
TermoZ CS 8 / 275 – 295 Renovation type countersunk mounted	240 - 260	0,001

**Table C5.2: Point thermal transmittance acc. to EOTA Technical Report TR 025:2016-05**

<b>Anchor Type TermoZ CS II 8  135 - 255</b>	<b>h<sub>nom</sub> [mm]</b>	<b>Thickness of insulation material h<sub>D</sub> [mm]</b>	<b>Point thermal transmittance χ [W/K]</b>				
			<b>Category A</b>	<b>Category B</b>	<b>Category C</b>	<b>Category D</b>	<b>Category E</b>
Flush mounted	32,5mm	100 - 120	0,001				
		140 - 200	0,002		0,001		
		220	0,002			0,001	
	52,5mm	100 - 120	-			0,001	
		140 - 220	-			0,001	
Countersunk mounted	32,5mm	100 - 120	0,001				
		140 - 200	0,001				
		220	0,002			0,001	
	52,5mm	100 - 120	-			0,000	
		140 - 220	-			0,001	

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Performance - Point thermal transmittance

**Annex C5**  
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**Table C6.1: Plate stiffness acc. to EOTA Technical Report TR 026:2016-05**

Anchor type	Max. size of the anchor plate [mm]	Load resistance of the anchor plate [kN]	Plate stiffness [kN/mm]
TermoZ CS 8	60	1,7	0,6
TermoZ CS II 8	60	2,61	1,29

**Table C6.2: Displacements of the TermoZ CS 8 / 95–115 and 275-375**

Base material	Tension load $N_{Rd}$ [kN]	Displacements $\Delta(\delta_N)$ [mm]
Concrete $\geq$ C12/15 (EN 206-1:2001)	0,40	< 0,3
Concrete $\geq$ C50/60 (EN 206-1:2001)	0,50	< 0,3
Weather resistant concrete shell $\geq$ C20/C25 (EN 206-1:2001)	0,40	< 0,4
Weather resistant concrete shell C50/60 (EN 206-1:2001)	0,50	< 0,4
Clay brick e.g. acc. to EN 771-1:2015, Mz 20	0,50	< 0,3
Calcium silicate solid bricks e.g. acc. to EN 771-2 :2015, KS 20	0,50	< 0,3
Calcium silicate solid bricks e.g. acc. to EN 771-2 :2015, KS 12	0,30	
Solid lightweight concrete block e.g. acc. to EN 771-3 :2015, Vbl8	0,17	< 0,2
Solid concrete block e.g. acc. to EN 771-3:2015, Vbn 20	0,40	< 0,3
Solid concrete block e.g. acc. to EN 771-3:2015, Vbn 12	0,25	
Vertically perforated clay brick e.g. acc. to EN 771-1:2015, Hlz 12	0,20	< 0,2
Vertically perforated clay brick e.g. acc. to EN 771-1:2015, Hlz 48	0,50	< 0,3
Hollow calcium silicate brick e.g. acc. to EN 771-2:2015, KSL 20	0,30	< 0,2
Hollow calcium silicate brick e.g. acc. to EN 771-2:2015, KSL 12	0,17	
Hollow brick lightweight concrete e.g. acc. to EN 771-3:2015, Hbl 4	0,17	< 0,1
Hollow brick concrete e.g. acc. to EN 771-3:2015, Hbn 10	0,40	< 0,2
Hollow brick concrete e.g. acc. to EN 771-3:2015, Hbn 8	0,30	
Hollow brick concrete e.g. acc. to EN 771-3:2015, Hbn 6	0,25	
Hollow brick concrete e.g. acc. to EN 771-3:2015, Hbn 4	0,17	
Lightweight Aggregate Concrete $\geq$ LAC 6 EN 1520:2011-06	0,25	< 0,2
Autoclaved aerated concrete blocks EN 771-4:2015, AAC 4 $h_{nom} = 35$ mm	0,10	< 0,1
Autoclaved aerated concrete blocks EN 771-4:2015, AAC 4, $h_{nom} = 55$ mm	0,20	< 0,1

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Plate stiffness and displacements

**Annex C6**  
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**Table C7.1: Displacements of the TermoZ CS II 8 / 135 - 255**

<b>Base material</b>	<b>Tension load <math>N_{Rd}</math> [kN]</b>	<b>Displacements <math>\Delta(\delta_N)</math> [mm]</b>
Concrete $\geq$ C12/15 (EN 206-1:2001) $\leq$ C50/60	0,5	< 0,3
Weather resistant concrete shell $\geq$ C20/C25 (EN 206-1:2001)	0,5	< 0,3
Clay brick e.g. acc. to EN 771-1:2015, Mz 20	0,5	< 0,5
Calcium silicate solid bricks e.g. acc. to EN 771-2 :2015, KS 20	0,5	< 0,3
Calcium silicate solid bricks e.g. acc. to EN 771-2 :2015, KS 12	0,5	
Solid lightweight concrete block e.g. acc. to EN 771-3 :2015, Vbl 8	0,43	< 0,4
Solid concrete block e.g. acc. to EN 771-3:2015, Vbn 20	0,5	< 0,3
Solid concrete block e.g. acc. to EN 771-3:2015, Vbn 12	0,5	
Vertically perforated clay brick e.g. acc. to EN 771-1:2015, Hlz 12 rotary drilling	0,33	< 0,5
Vertically perforated clay brick e.g. acc. to EN 771-1:2015, Hlz 12 hammer drilling	0,22	< 0,3
Vertically perforated clay brick e.g. acc. to EN 771-1:2015, Hlz 48 rotary drilling	0,5	< 0,4
Vertically perforated clay brick e.g. acc. to EN 771-1:2015, Hlz 48 hammer drilling	0,5	
Hollow calcium silicate brick e.g. acc. to EN 771-2:2015, KSL 12	0,5	< 0,4
Hollow brick lightweight concrete e.g. acc. to EN 771-3:2015, Hbl 4	0,17	< 0,2
Hollow brick concrete e.g. acc. to EN 771-3:2015, Hbn 10	0,5	< 0,4
Hollow brick concrete e.g. acc. to EN 771-3:2015, Hbn 8	0,5	< 0,4
Hollow brick concrete e.g. acc. to EN 771-3:2015, Hbn 6	0,37	< 0,3
Hollow brick concrete e.g. acc. to EN 771-3:2015, Hbn 4	0,25	< 0,2
Lightweight Aggregate Concrete $\geq$ LAC 6 EN 1520	0,5	< 0,5
Lightweight Aggregate Concrete $\geq$ LAC 4 EN 1520	0,32	< 0,5
Autoclaved aerated concrete blocks e.g. acc. to EN 771-4:2015, AAC 4, $h_{nom} = 32,5$ mm	0,22	< 0,2
Autoclaved aerated concrete blocks e.g. acc. to EN 771-4:2015, AAC 4, $h_{nom} = 52,5$ mm	0,37	

**fischer TermoZ CS 8 and fischer TermoZ CS II 8**

Displacements

**Annex C7**  
of European  
Technical  
Assessment  
ETA-14/0372