Deutsches Institut für Bautechnik

Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

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European Technical Assessment ETA-21/0003 of 25 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	Sika ThermoCoat®-8 HS CL Sika ThermoCoat®-8 HS CL R Sika ThermoCoat®-8 HS CL Plus
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	SIKA HELLAS S. A. 15 Protomagias str. GR 145 68 KRYONERI GRIECHENLAND
Manufacturing plant	SIKA
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 Sika ThermoCoat®-8 HS CL, Sika ThermoCoat®-8 HS CL R and Sika ThermoCoat®-8 HS CL Plus consists of an anchor sleeve with an enlarged shaft 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 ≥ 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 ThermoCoat®-8 HS CL / 250 - 390 and Sika ThermoCoat®-8 HS CL 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	
- Characteristic resistance under tension load	See Annex C1 and C2
- Minimum edge distance and spacing	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.

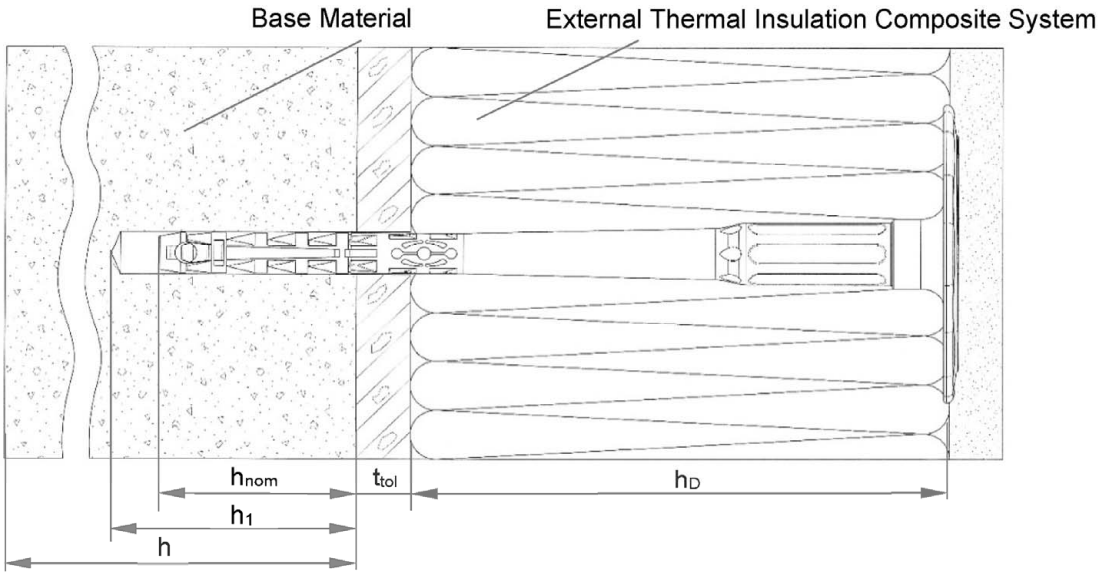
Issued in Berlin on 25 November 2021 by Deutsches Institut für Bautechnik

Dipl.-Ing. Beatrix Wittstock
Head of Section

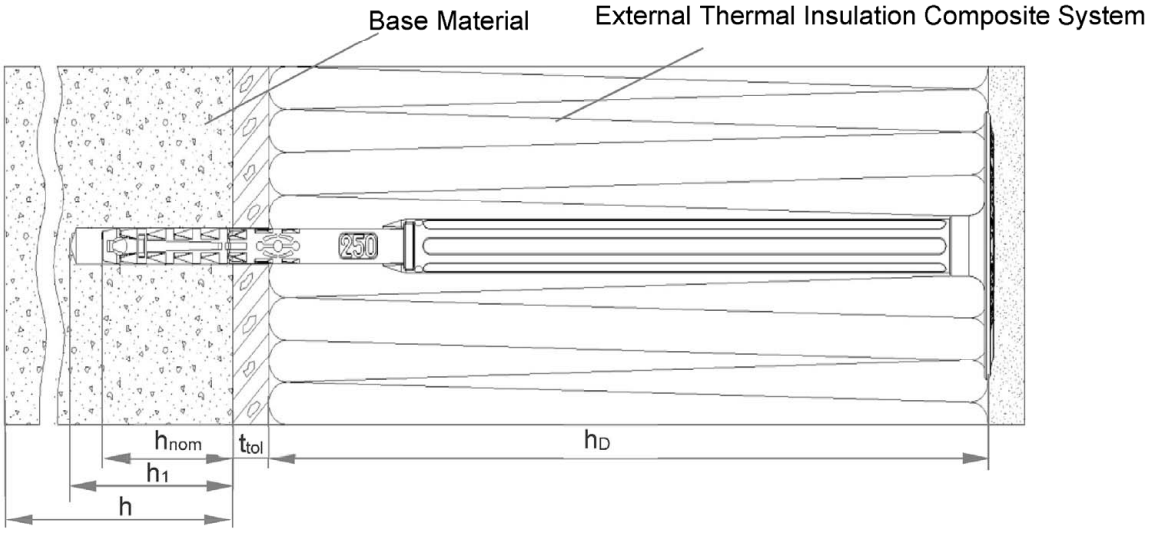
beglaubigt:
Ziegler

Deutsches Institut für Bautechnik DIBt

Sika ThermoCoat®-8 HS CL / 110 – 230 / Sika ThermoCoat®-8 HS CL Plus / 110 – 230 – flush mounted



Sika ThermoCoat®-8 HS CL / 250 – 390 / Sika ThermoCoat®-8 HS CL R / 250 – 310 / Sika ThermoCoat®-8 HS CL Plus / 250-390 – flush 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
t_{tol} = Thickness of equalizing layer or non–load bearing coating

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	**Annex A1**
Product description Installed anchor – flush-mounted	

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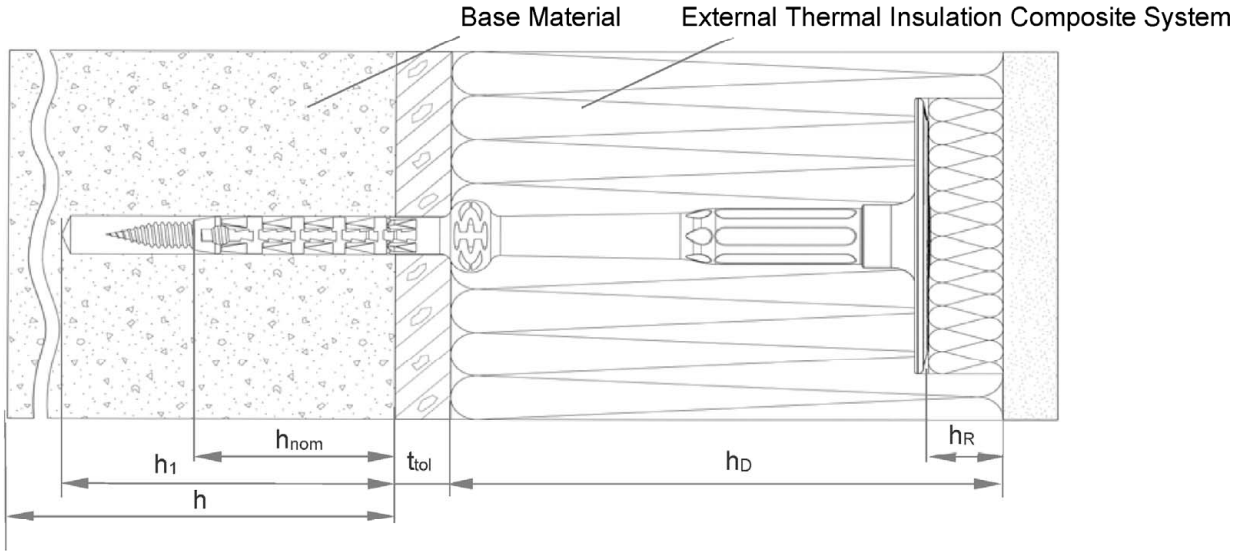
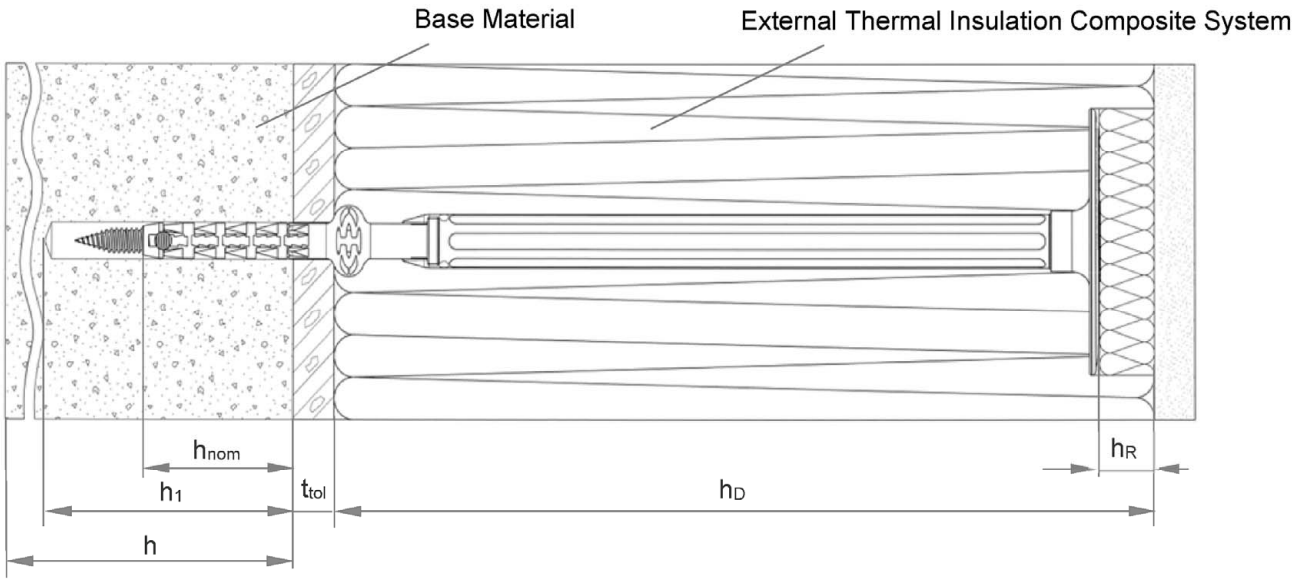
Sika ThermoCoat®-8 HS CL Plus / 110 – 230 – countersunk mounted



Sika ThermoCoat®-8 HS CL Plus / 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

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	**Annex A2**
Product description Installed anchor – countersunk mounted	

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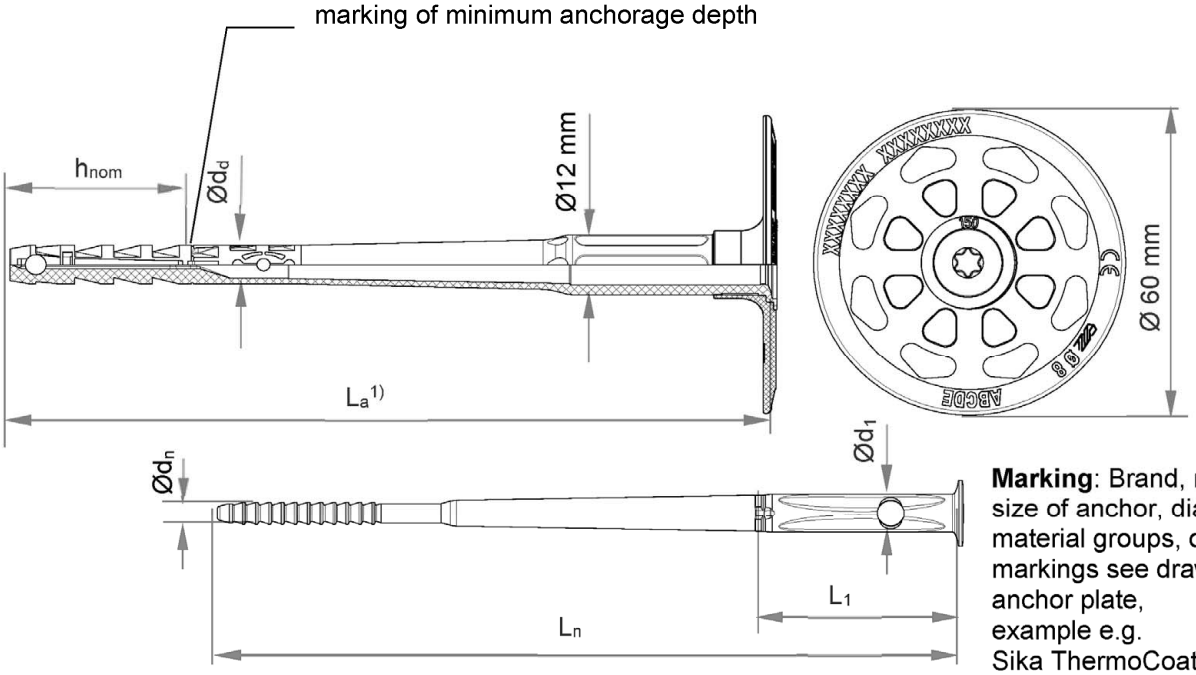
Sika ThermoCoat®-8 HS CL / 110-230



Marking: Brand, name and size of anchor, diameter, base material groups, optional markings see drawing of anchor plate, example e.g. Sika ThermoCoat®-8 HS CL ABCDE

1) Various length of the anchors are possible

e.g. for Sika ThermoCoat®-8 HS CL / 110-230:
110 mm ≥ L_a ≤ 230 mm
$L_a = L_n + 4$ mm

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

e.g. for Sika ThermoCoat®-8 HS CLx150: L_a = 148 mm, h_{nom} = 35 mm, t_{tol} = 10 mm

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

Table A3.1: Dimensions Sika ThermoCoat®-8 HS CL / 110-230

Anchor type	Anchor sleeve		Specific compound nail		
	Ø d_d [mm]	**h_{nom}** [mm]	**Ø d_n** [mm]	**L_1** [mm]	**Ø d_1** [mm]
Sika ThermoCoat®-8 HS CL / 110-230	8	35/55[2)]	4,5	40	8

2) Only for base material group E

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	**Annex A3**
Product description Dimensions Sika ThermoCoat®-8 HS CL / 110-230	

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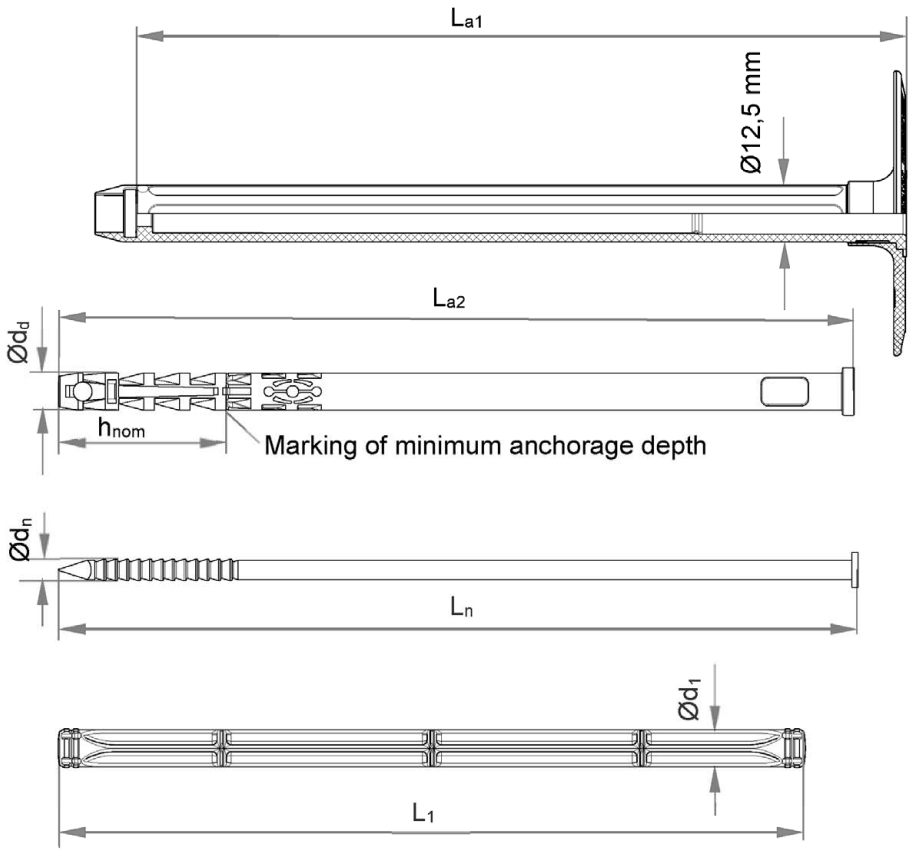
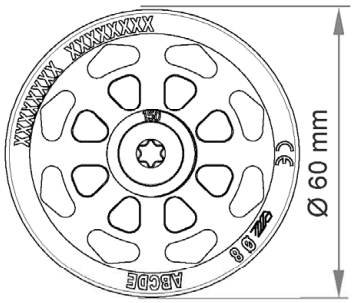
Sika ThermoCoat®-8 HS CL / 250 – 390





Marking: Brand, name and size of anchor, diameter, base material groups, optional markings see drawing of anchor plate, example e.g.
Sika ThermoCoat®-8 HS CL
ABCDE

Various lengths of the anchors are possible:

e.g. for Sika ThermoCoat®-8 HS CL / 250 – 390:
250 mm ≥ L_{a1} + L_{a2} ≤ 390 mm
L_a = L_{a1} + L_{a2} = L_n + 160,5 mm

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

e.g. for Sika ThermoCoat®-8 HS CLx330: L_a = 328 mm, h_{nom} = 35 mm, t_{tol} = 10 mm
h_D = 328 – 35 – 10 ≈ 280 mm

Table A4.1: Dimensions Sika ThermoCoat®-8 HS CL / 250 – 390

Anchor type	Shaft	Anchor sleeve			Nail		Plastic cylinder	
	L_{a1} [mm]	Ø d_d [mm]	h_{nom} [mm]	L_{a2} [mm]	Ø d_n [mm]	L_n [mm]	L_1 [mm]	Ø d_1 [mm]
Sika ThermoCoat®-8 HS CL / 250 – 390	161	8	35/55[1)]	87 - 247	4,5	(L_{a1}+L_{a2}) – 160,5	157	8

[1)] Only for base material group E

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus

Product description
Dimensions Sika ThermoCoat®-8 HS CL / 250-390

Annex A4

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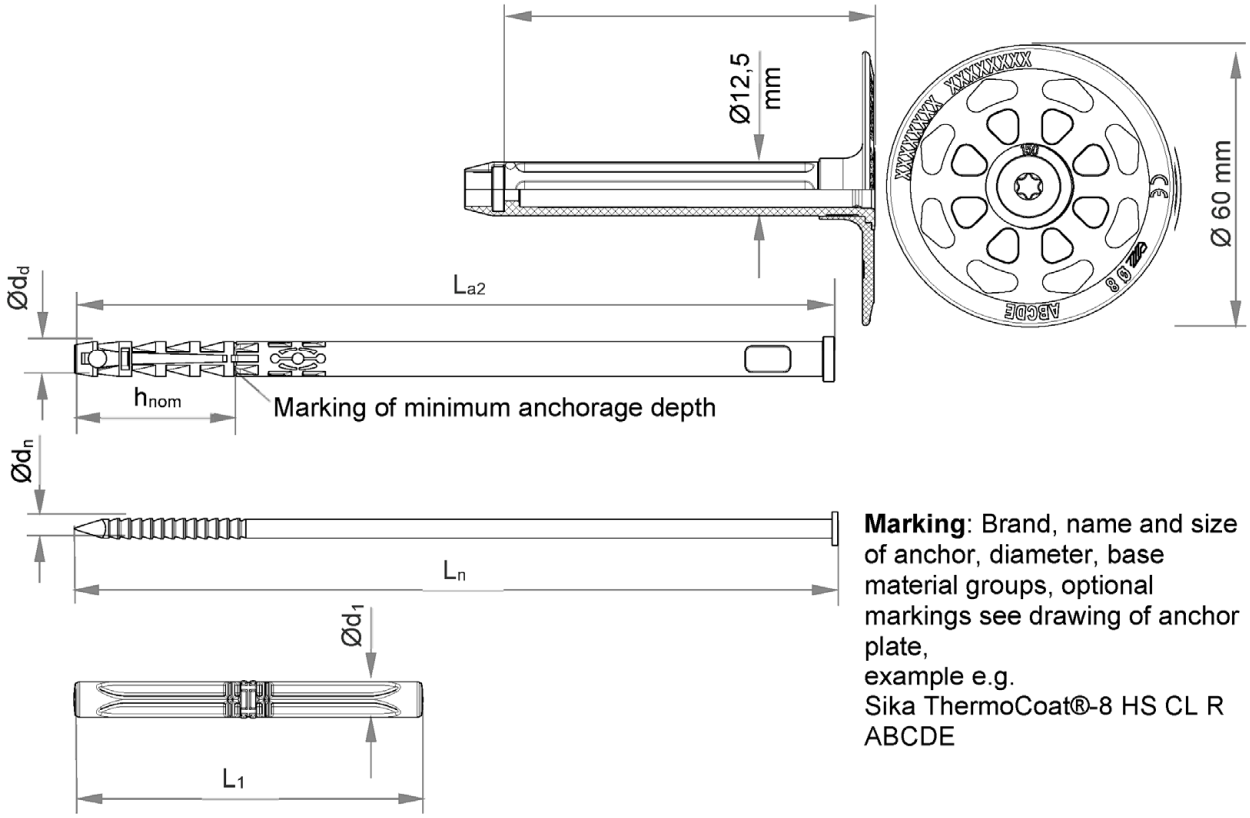
Sika ThermoCoat®-8 HS CL R / 250 – 310



Marking: Brand, name and size of anchor, diameter, base material groups, optional markings see drawing of anchor plate,
example e.g.
Sika ThermoCoat®-8 HS CL R ABCDE

Various lengths of the anchors are possible:

e.g. for Sika ThermoCoat®-8 HS CL R / 250 – 310:
250 mm ≥ L_{a1} + L_{a2} ≤ 310 mm
L_a = L_{a1} + L_{a2} = L_n + 80,5 mm

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

e.g. for Sika ThermoCoat®-8 HS CL R 8x250: L_a = 248 mm, h_{nom} = 35 mm, t_{tol} = 10 mm

h_D = 248 – 35 – 10 ≈ 200 mm

Table A5.1: Dimensions Sika ThermoCoat®-8 HS CL R / 250 – 310

Anchor type	Shaft	Anchor sleeve			Nail		Plastic cylinder	
	L_{a1} [mm]	Ø d_d [mm]	h_{nom} [mm]	L_{a2} [mm]	Ø d_n [mm]	L_n [mm]	L_1 [mm]	Ø d_1 [mm]
Sika ThermoCoat®-8 HS CL R / 250 – 310	81	8	35/55[1)]	167 - 247	4,5	(L_{a1}+L_{a2}) – 80,5	77	8

[1)] Only for base material group E

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	**Annex A5**
Product description Dimensions Sika ThermoCoat®-8 HS CL R / 250-310	

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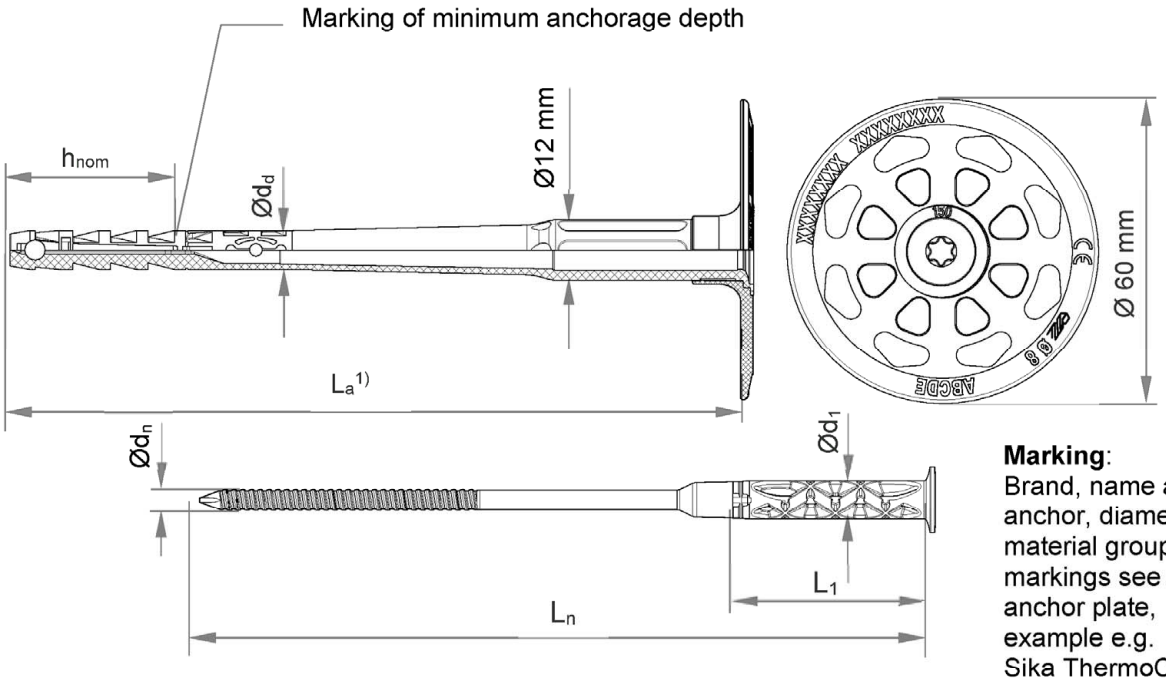
Sika ThermoCoat®-8 HS CL Plus / 110–230



Marking:
Brand, name and size of anchor, diameter, base material groups, optional markings see drawing of anchor plate,
example e.g.
Sika ThermoCoat®-8 HS CL Plus ABCDE

[1)]Various lengths of the anchors are permissible:

e.g. for Sika ThermoCoat®-8 HS CL Plus / 110 – 230:
110 mm ≥ L_a ≤ 230 mm
$L_a = L_n + 1{,}5$ mm

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

e.g. for Sika ThermoCoat®-8 HS CL Plus x150: L_a = 148 mm, h_{nom} = 35 mm, t_{tol} = 10 mm

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

Table A6.1: Dimensions Sika ThermoCoat®-8 HS CL Plus / 110–230

Anchor type	Anchor sleeve		Specific compound nail			
	Ø d_d [mm]	h_{nom} [mm]	Ø d_n [mm]	L_n [mm]	L_1 [mm]	Ø d_1 [mm]
Sika ThermoCoat®-8 HS CL Plus / 110-230	8	35/55[1)]	4,3	L_a – 1,5	40	8

[1)] Only for base material group D & E

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	**Annex A6**
Product description Dimensions Sika ThermoCoat®-8 HS CL Plus / 110-230	

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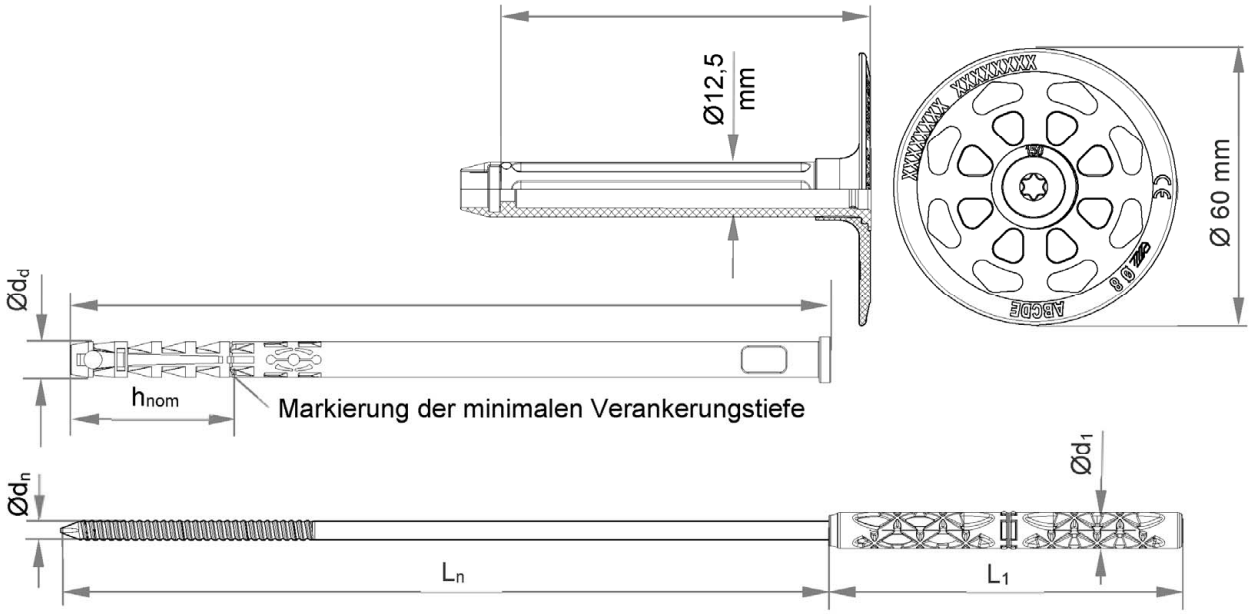
Sika ThermoCoat®-8 HS CL Plus / 250–310



Various lengths of the anchors are possible:

e.g. for Sika ThermoCoat®-8 HS CL Plus / 250 – 310:
250 mm ≥ L_{a1} + L_{a2} ≤ 310 mm
L_a = L_{a1} + L_{a2} = L_n + 79,5 mm

Marking: Brand, name and size of anchor, diameter, base material groups, optional markings see drawing of anchor plate, example e.g. Sika ThermoCoat®-8 HS CL Plus ABCDE

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

e.g. for Sika ThermoCoat®-8 HS CL Plus x 250: L_a = 248 mm, h_{nom} = 35 mm, t_{tol} = 10 mm

h_D = 248 – 35 – 10 ≈ 200 mm

Table A7.1: Dimensions Sika ThermoCoat®-8 HS CL Plus / 250 – 310

Anchor type	Shaft	Anchor sleeve			Specific compound nail			
	L_{a1} [mm]	Ø d_d [mm]	h_{nom} [mm]	L_{a2} [mm]	Ø d_n [mm]	L_n [mm]	L_1 [mm]	Ø d_1 [mm]
Sika ThermoCoat®-8 HS CL Plus / 250 – 310	81	8	35/55[1)]	167 - 247	4,3	(L_{a1}+L_{a2}) – 79,5	77,5	8

[1)] Only for base material group D & E

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	Annex A7
Product description Dimensions Sika ThermoCoat®-8 HS CL Plus / 250-310	

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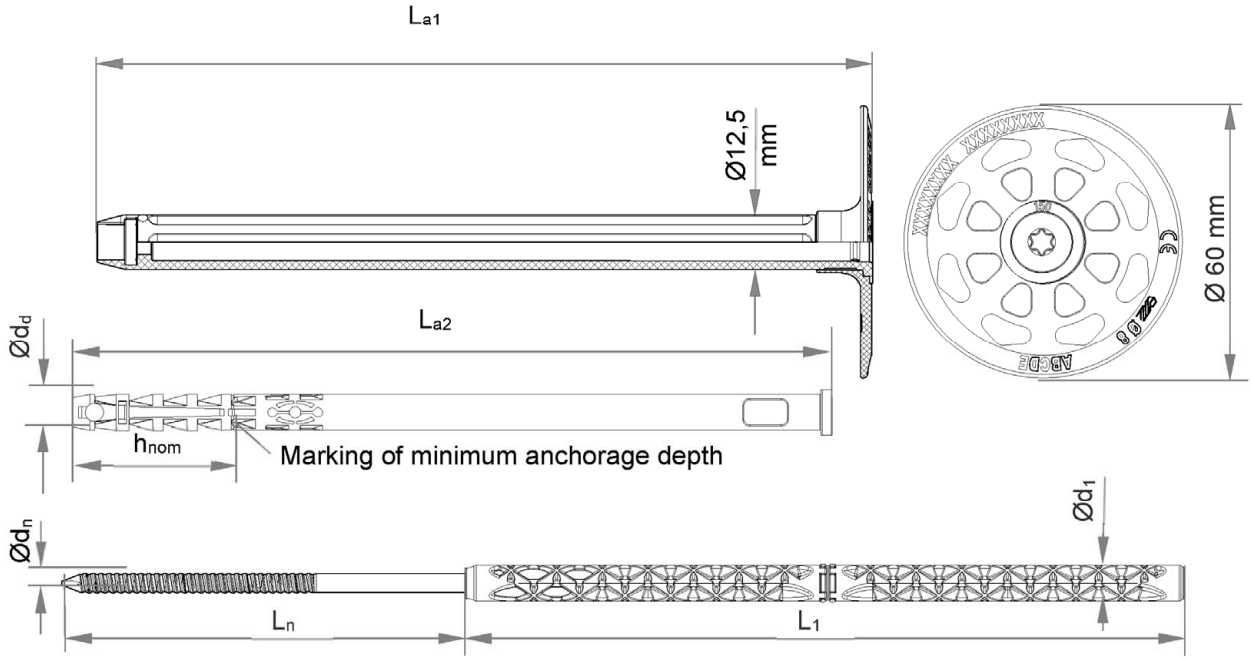
Sika ThermoCoat®-8 HS CL Plus / 330–390



Marking: Brand, name and size of anchor, diameter, base material groups, optional markings see drawing of anchor plate, example e.g. Sika ThermoCoat®-8 HS CL Plus ABCDE

Various lengths of the anchors are possible:

e.g. for Sika ThermoCoat®-8 HS CL Plus / 330 – 390:
330 mm ≥ L_{a1} + L_{a2} ≤ 390 mm
L_a = L_{a1} + L_{a2} = L_n + 159,5 mm

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

e.g. for Sika ThermoCoat®-8 HS CL Plus x 330: L_a = 328 mm, h_{nom} = 35 mm, t_{tol} = 10 mm

h_D = 328 – 35 – 10 ≈ 280 mm

Table A8.1: Dimensions Sika ThermoCoat®-8 HS CL Plus / 330 – 390

Anchor type	Shaft	Anchor sleeve			Specific compound nail			
	L_{a1} [mm]	Ø d_d [mm]	h_{nom} [mm]	L_{a2} [mm]	Ø d_n [mm]	L_n [mm]	L_1 [mm]	Ø d_1 [mm]
Sika ThermoCoat®-8 HS CL Plus / 330 – 390	161	8	35/55[1)]	167 - 247	4,3	(L_{a1}+L_{a2}) – 159,5	157,5	8

[1)] Only for base material group D & E

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	Annex A8
Product description Dimensions Sika ThermoCoat®-8 HS CL Plus / 330-390	

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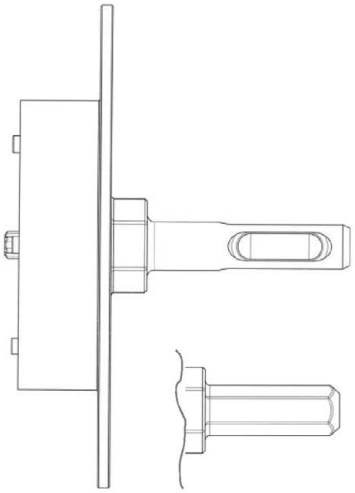
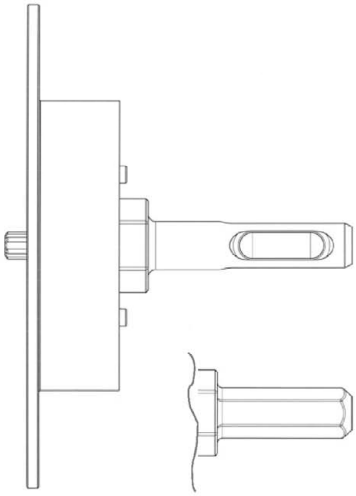
Setting tool with SDS adapter or hexagonal adapter available

Sika ThermoCoat®-8 HS CL Plus

Countersunk setting [1)]

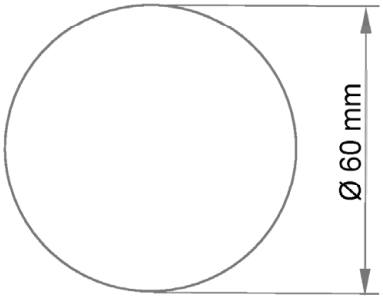


optional plain surface setting



[1)] Alternatively, it is possible to mill the insulation material with a standard, market-available milling tool.

Polystyrene or mineral wool cap



Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	**Annex A9**
Product description Setting tool for Sika ThermoCoat®-8 HS CL Plus	

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Table A10.1: Material

Designation	Material
Anchor sleeve	PP (virgin material), colour: grey
Shaft Sika ThermoCoat®-8 HS CL / 250 – 390 or Sika ThermoCoat®-8 HS CL R / 250 – 310 or Sika ThermoCoat®-8 HS CL Plus / 250 - 390	PA6 (virgin material) GF, colour: grey
Plastic cylinder Sika ThermoCoat®-8 HS CL / 250 – 390 or Sika ThermoCoat®-8 HS CL R / 250 – 310	PA6 (virgin material) GF
Specific nail Sika ThermoCoat®-8 HS CL / 250 – 390 or Sika ThermoCoat®-8 HS CL R / 250 – 310	Galvanized steel gvz with Zn5/Ag or Zn5/An acc. to EN ISO 4042:2018
Specific compound nail Sika ThermoCoat®-8 HS CL / 110 – 230 or Sika ThermoCoat®-8 HS CL Plus / 110 – 230 or Sika ThermoCoat®-8 HS CL Plus / 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

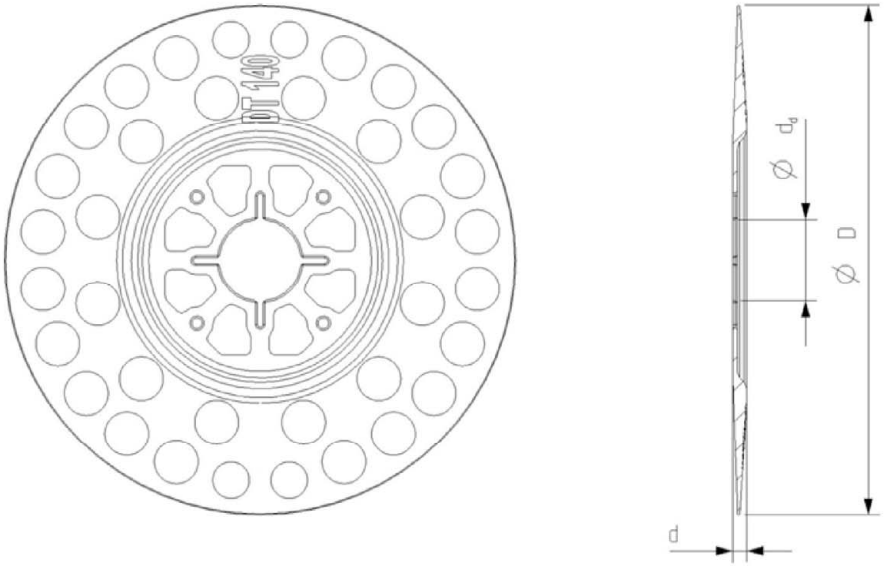

Table A10.2: Slip-on plate, diameters and material

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

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	**Annex A10**
Product description Material, Slip-on plates combined with Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	

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Specifications of intended use

Anchorages 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 γ_M = 2,0 and γ_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 ≤ 6 weeks.

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	**Annex B1**
Intended use Specification	

Deutsches Institut für Bautechnik DIBt

Table B2.1: Installation parameters / flush mounted

Anchor type				Sika ThermoCoat®-8 HS CL | CL R Sika ThermoCoat®-8 HS CL Plus
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[1)]/65[2)]
Overall plastic anchor embedment depth in the base material	h_{nom}	≥	[mm]	35/45[1)]/55[2)]

[1)] Only Sika ThermoCoat®-8 HS CL Plus: for weather shell (thin concrete slabs) : 35 mm ≤ h_{nom} ≤ 45 mm
[2)] Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R : Only for base material group "E"
Sika ThermoCoat®-8 HS CL Plus: Only for base material group "D" & "E"

Table B2.2: Installation parameters / countersunk mounted

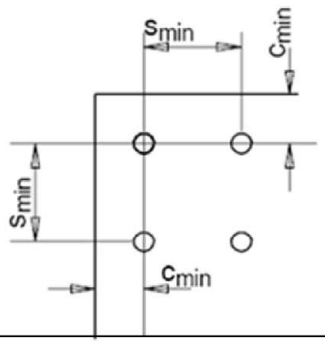
Anchor type				Sika ThermoCoat®-8 HS CL Plus
Drill hole diameter	d_0	=	[mm]	8
Cutting diameter of drill bit	d_{cut}	≤	[mm]	8,45
Depth of drilled hole to deepest point	h_1	≥	[mm]	60/70[1)]/80[2)]
Overall plastic anchor embedment depth in the base material	h_{nom}	≥	[mm]	35/45[1)]/55[2)]

[1)] valid for weather shell (thin concrete slabs): 35 mm ≤ h_{nom} ≤ 45 mm
[2)] Only for base material group "D" & "E"

Table B2.3: Minimum distances and spacing

				Sika ThermoCoat®-8 HS CL | CL R Sika ThermoCoat®-8 HS CL Plus
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



Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus

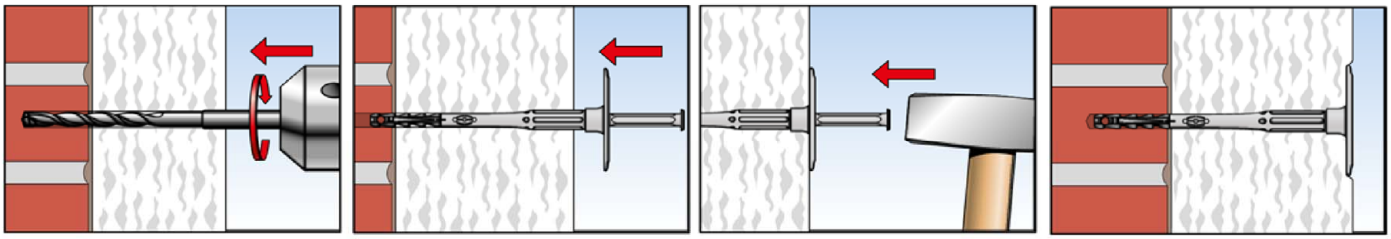
Intended use
Installation parameters
Minimum distances and spacing

Annex B2

Deutsches Institut für Bautechnik DIBt

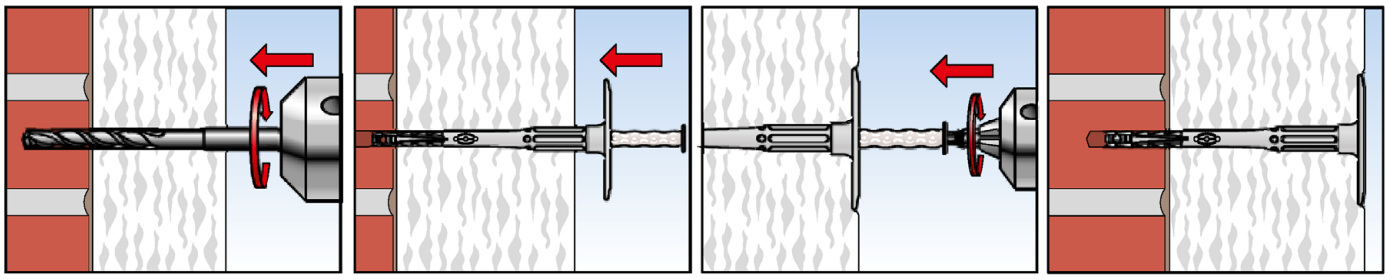
Installation instructions

Setting of anchor (flush mounted) by hammer / Sika ThermoCoat®-8 HS CL | CL R | CL Plus



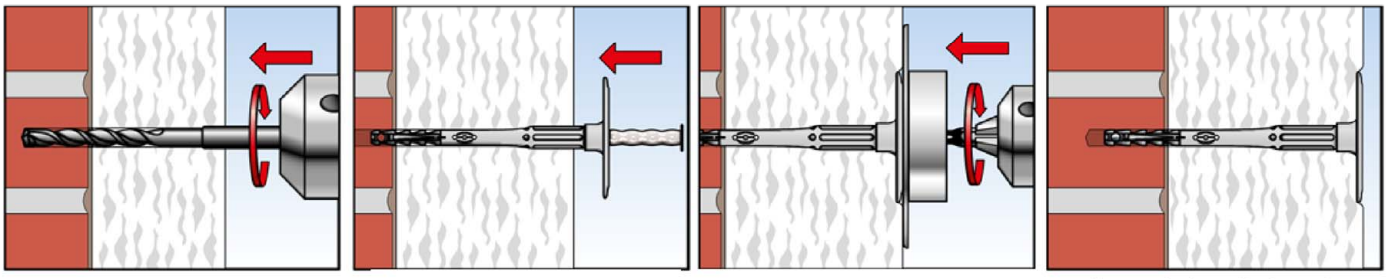
1. Drill hole by corresponding drilling method
2. Insert anchor manually
3. Set anchor by hammerblows
4. Correctly installed anchor

Setting of anchor (flush mounted) by machine / Sika ThermoCoat®-8 HS CL Plus



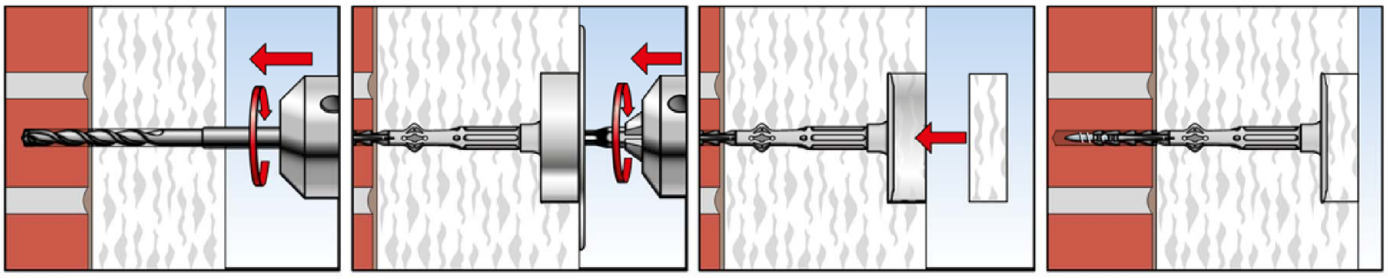
1. Drill hole by corresponding drilling method
2. Insert anchor manually
3. Set anchor by machine.
4. Correctly installed anchor

Setting of anchor (flush mounted) by setting tool \ Sika ThermoCoat®-8 HS CL Plus



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 / Sika ThermoCoat®-8 HS CL Plus



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

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	**Annex B3**
Intended use Installation instruction	

Deutsches Institut für Bautechnik DIBt

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

Base material	Base material group[1]	Min. compressive strength f_b [N/mm²]	Bulk density ρ [kg/dm³]	Remarks	Drill method[2]	Characteristic resistance N_{Rk} [kN] **Sika ThermoCoat®-8 HS CL, Sika ThermoCoat®-8 HS CL R**
Concrete C12/15 - C50/60 EN 206:2013+A1:2016	A	-	-	Compacted normal weight concrete without fibres	H	**0,9**
Solid clay bricks **Mz** as per EN 771-1:2011+A1:2015	B	12	≥ 2,0	Cross section reduced up to 15% by perforation vertically to the resting area	H	**0,9**
Calcium silicate solid bricks **KS** as per EN 771-2:2011+A1:2015	B	12	≥ 1,8		H	**0,9**
Solid concrete blocks **Vbn** as per EN 771-3:2011+A1:2015	B	20	≥ 2,0		H	**0,75**
Lightweight concrete blocks **Vbl** as per EN 771-3:2011+A1:2015	B	8	≥ 1,4		H	**0,6**
Vertically perforated clay bricks **Hlz** as per EN 771-1:2011+A1:2015	C	12	≥ 1,0	Vertically perforation[4] >15% and ≤ 50%, Exterior web thickness ≥ 15 mm	R	**0,6**
Hollow calcium silicate brick **KSL** as per EN 771-2:2011+A1:2015	C	20	≥ 1,4	Vertically perforation[4] >15% and ≤ 50%, Exterior web thickness ≥ 23 mm	H	**0,75**
		12				**0,5**
Lightweight concrete hollow blocks **Hbl** as per EN 771-3:2011+A1:2015	C	10	≥ 1,2	Vertically perforation[4] >15% and ≤ 50%, Exterior web thickness ≥ 38 mm	H	**0,6**
Lightweight aggregate concrete **LAC** as per EN 1520:2011, EN 771-3:2011+A1:2015	D	6	≥ 0,8	-	H	**0,6**
		4				**0,4**
Autoclaved aerated concrete blocks, **AAC** as per EN 771-4:2011+A1:2015	E	6	> 0,6	-	R	**0,3[3]**
		4	> 0,4			**0,3[3]**

[1] See Annex B1
[2] R = Rotary drilling | H = Hammer drilling
[3] Only valid for $h_{nom} \geq 55$ mm
[4] Cross section reduced by perforation vertically to the resting area

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	**Annex C1**
Performance Characteristic resistance Sika ThermoCoat®-8 HS CL, Sika ThermoCoat®-8 HS CL R	

Deutsches Institut für Bautechnik DIBt

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

Base material	Base material group[1)]	Min. compressive strength f_b [N/mm²]	Bulk density ρ [kg/dm³]	Remarks	Drill method [2)]	Characteristic resistance N_{Rk} [kN] **Sika ThermoCoat®-8 HS CL Plus**
Concrete C12/15 - C50/60 EN 206:2013+A1:2016	A	-	-	Compacted normal weight concrete without fibres	H	**0,9**
Weather resistant concrete shell C20/25 –C50/60 EN 206:2013+A1:2016	A	-	-	Compacted normal weight concrete without fibres h ≥ 42 mm; t_{fix} ≥ 35mm	H	**0,9**
Solid clay bricks **Mz** as per EN 771-1:2011+A1:2015	B	20	≥ 1,8	Cross section reduced up to 15% by perforation vertically to the resting area	H	**0,9**
Calcium silicate solid bricks **KS** as per EN 771-2:2011+A1:2015	B	20	≥ 1,8		H	**0,9**
Solid concrete blocks **Vbn** as per EN 771-3:2011+A1:2015	B	20	≥ 2,0		H	**0,9**
Lightweight concrete blocks **Vbl** as per EN 771-3:2011+A1:2015	B	10	≥ 1,6		H	**0,75**
Vertically perforated clay bricks **Hlz** as per EN 771-1:2011+A1:2015	C	48	≥ 1,6	Vertically perforation[4)] >15% and ≤ 50%, Exterior web thickness ≥ 17 mm	R	**0,75**
		12	≥ 1,0	Vertically perforation[4)] >15% and ≤ 50%, Exterior web thickness ≥ 15 mm		**0,5**
Hollow calcium silicate brick **KSL** as per EN 771-2:2011+A1:2015	C	16	≥ 1,4	Vertically perforation[4)] >15% and ≤ 50%, Exterior web thickness ≥ 16 mm	H	**0,5**
Lightweight concrete hollow blocks **Hbl** as per EN 771-3:2011+A1:2015	C	10	≥ 1,2	Vertically perforation[4)] >15% and ≤ 50%, Exterior web thickness ≥ 38 mm	H	**0,6**
Lightweight aggregate concrete **LAC** as per EN 1520:2011, EN 771-3:2011+A1:2015	D	6	≥ 0,9	-	H	**0,4[3)]**
Autoclaved aerated concrete blocks **AAC** as per EN 771-4:2011+A1:2015	E	4	> 0,4	-	R	**0,3[3)]**

[1)] See Annex B1
[2)] R = Rotary drilling | H = Hammer drilling
[3)] Only valid for h_{nom} ≥ 55 mm
[4)] Cross section reduced by perforation vertically to the resting area

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	**Annex C2**
Performance Characteristic resistance Sika ThermoCoat®-8 HS CL Plus	

Deutsches Institut für Bautechnik DIBt

Table C3.1: Point thermal transmittance acc. to EOTA Technical Report TR 025: 2016 – 05
Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R

Anchor type	Thickness of insulation material h_D [mm]	Point thermal transmittance χ [W/K]
Sika ThermoCoat®-8 HS CL / 110-230	60 - 80	0,001
	> 80 - 180	0,000
Sika ThermoCoat®-8 HS CL / 250-350	200 - 300	0,000
Sika ThermoCoat®-8 HS CL / 370-390	> 300 - 340	0,001
Sika ThermoCoat®-8 HS CL R / 250-310	200 - 260	0,001

Table C3.2: Point thermal transmittance acc. to EOTA Technical Report TR 025: 2016 – 05
Sika ThermoCoat®-8 HS CL Plus - flush mounted

<table>
<tr><th rowspan="2">Thickness of insulation material h_D [mm]</th><th colspan="5">Point thermal transmittance χ [W/K]
Base material group</th></tr>
<tr><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th></tr>
<tr><td>60</td><td rowspan="2">0,001</td><td rowspan="2">0,001</td><td rowspan="3">0,001</td><td rowspan="4">0,001</td><td>0</td></tr>
<tr><td>80</td><td rowspan="11">0,001</td></tr>
<tr><td>100</td><td rowspan="11">0,002</td><td rowspan="11">0,002</td></tr>
<tr><td>120</td><td rowspan="3">0,002</td></tr>
<tr><td>140</td><td>0,002</td></tr>
<tr><td>160</td><td rowspan="4">0,001</td></tr>
<tr><td>180</td><td rowspan="6">0,001</td></tr>
<tr><td>200</td></tr>
<tr><td>220</td></tr>
<tr><td>240</td></tr>
<tr><td>260</td><td>0</td><td rowspan="2">0</td></tr>
<tr><td>280</td><td rowspan="4">0,001</td><td rowspan="4">0,001</td></tr>
<tr><td>300</td><td>0,001</td></tr>
<tr><td>320</td><td colspan="2" rowspan="2">no performance assessed</td></tr>
<tr><td>340</td></tr>
</table>

Table C3.3: Point thermal transmittance acc. to EOTA Technical Report TR 025: 2016 – 05
Sika ThermoCoat®-8 HS CL Plus - countersunk mounted

<table>
<tr><th rowspan="2">Thickness of insulation material h_D [mm]</th><th colspan="5">Point thermal transmittance χ [W/K]
Base material group</th></tr>
<tr><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th></tr>
<tr><td>80</td><td rowspan="4">0,001</td><td>0</td><td>0</td><td>0</td><td rowspan="2">0</td></tr>
<tr><td>100</td><td rowspan="4">0,001</td><td rowspan="11">0,001</td><td rowspan="11">0,001</td></tr>
<tr><td>120</td><td rowspan="3">0,001</td></tr>
<tr><td>140</td></tr>
<tr><td>160</td><td rowspan="2">0,002</td><td rowspan="2">0,001</td></tr>
<tr><td>180</td><td>0,002</td></tr>
<tr><td>200</td><td rowspan="4">0,001</td><td rowspan="4">0,001</td></tr>
<tr><td>220</td></tr>
<tr><td>240</td></tr>
<tr><td>260</td><td rowspan="3">0</td><td rowspan="3">0</td></tr>
<tr><td>280</td><td>0</td><td>0</td><td rowspan="2">0</td></tr>
<tr><td>300</td><td rowspan="3">0,001</td><td rowspan="3">0,001</td></tr>
<tr><td>320</td><td rowspan="2">0,001</td></tr>
<tr><td>340</td><td colspan="2">no performance assessed</td></tr>
</table>

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus

Performance
Point thermal transmittance

Annex C3

Deutsches Institut für Bautechnik DIBt

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]
Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R	60	1,7	0,6

Table C4.2: Displacements Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R

Base material	Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R	
	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
Lightweight aggregate concrete (EN 1520:2011, EN 771-3:2011+A1:2015) LAC 4	0,13	
Autoclaved aerated concrete blocks (EN 771-4:2011+A1:2015), AAC 4	0,13	< 0,3

Table C4.3: Displacements Sika ThermoCoat®-8 HS CL Plus

Base material	Sika ThermoCoat®-8 HS CL 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 ≥ 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

Sika ThermoCoat®-8 HS CL | Sika ThermoCoat®-8 HS CL R | Sika ThermoCoat®-8 HS CL Plus	**Annex C4**
Performance Plate stiffness, Displacements	