Deutsches Institut für Bautechnik

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Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

European Technical Assessment

ETA-17/0077 of 23 May 2018

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	weber.therm SRD-5 and weber.therm SLD-5
Product family to which the construction product belongs	Screwed-in plastic anchor and nailed-in plastic anchor for the fixing of external thermal insulation composite systems with rendering in concrete and masonry
Manufacturer	Saint-Gobain Weber GmbH Schanzenstraße 84 40549 Düsseldorf DEUTSCHLAND
Manufacturing plant	Werk E-171, E-172, E-173, E-174
This European Technical Assessment contains	23 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
This version replaces	ETA-17/0077 issued on 4 January 2018

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Specific Part

1 Technical description of the product

The screwed-in anchor weber.therm SRD-5 consists of an anchor sleeve with an enlarged shaft, spreading zone subsequently, an insulation plate made of virgin polyethylene and an accompanying specific screw of galvanised steel or stainless steel. The head of screw has an overmoulding of polyamide. The serrated expanding part of the anchor sleeve is slotted.

The nailed-in anchor weber.therm SLD-5 consists of an anchor sleeve with an enlarged shaft, spreading zone subsequently, an insulation plate made of virgin polyethylene and an accompanying specific nail of galvanised steel with an overmoulding of polyamide. The serrated expanding part of the anchor sleeve is slotted.

The anchors weber.therm SRD-5 and weber.therm SLD-5 may in addition be combined with the anchor plates SBL 140 plus and VT 90. The anchor weber.therm SRD-5 may in addition be combined with the anchor plate VT 2G.

An illustration and the description of the product are given in Annex A.

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

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

The verification and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the anchor of at least 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

3.1 Safety and accessibility in use (BWR 4)

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

3.2 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Point thermal transmittance	See Annex C 2

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 EAD

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

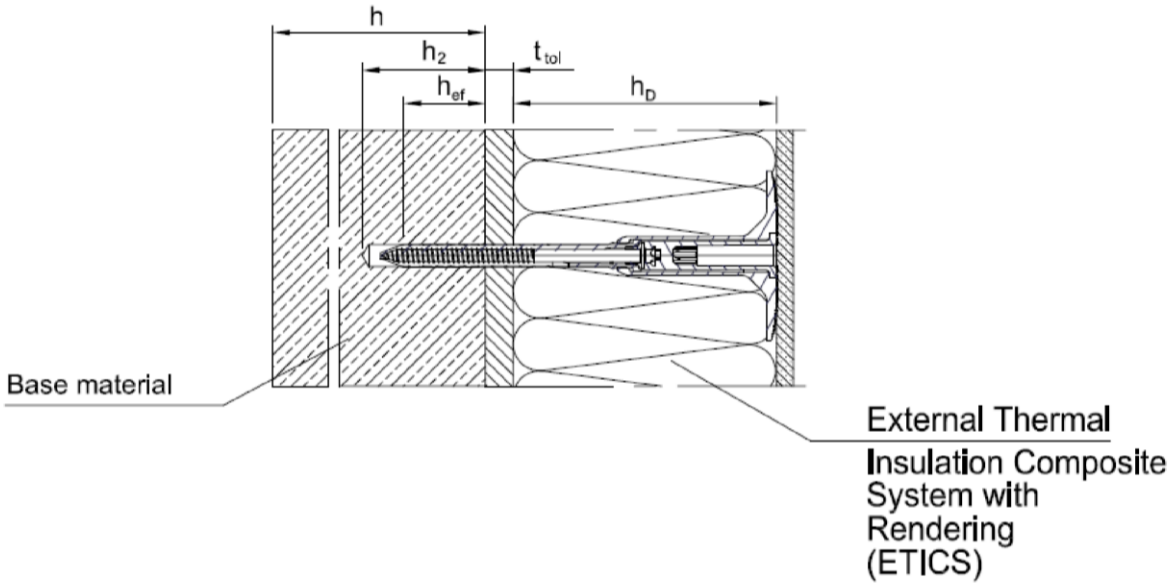
Issued in Berlin on 23 May 2018 by Deutsches Institut für Bautechnik

BD Dipl.-Ing. Andreas Kummerow
Head of Department

beglaubigt:
E. Aksünger

Deutsches Institut für Bautechnik DIBt

weber.therm SRD-5, mounting flushed at the surface



Intended use

- Anchorage of ETICS in concrete and masonry
- Anchorage of ETICS in autoclaved aerated concrete and lightweight aggregate concrete

Legend:
h_D = thickness of insulation material
h_{ef} = effective anchorage depth
h = thickness of member (wall)
h_2 = depth of drilled hole to deepest point
t_{tol} = thickness of equalizing layer or non-load-bearing coating

weber.therm SRD-5 and weber.therm SLD-5	**Annex A 1**
Product description Installed condition weber.therm SRD-5, flushed at the surface	

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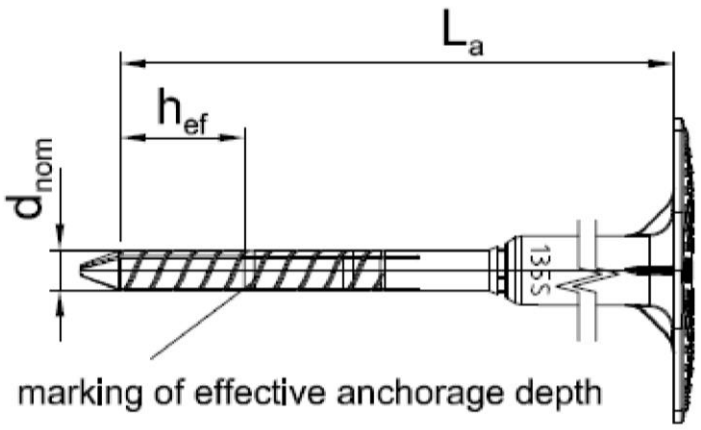
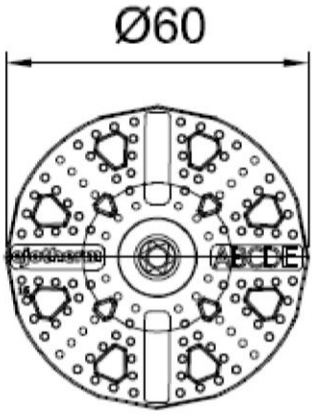
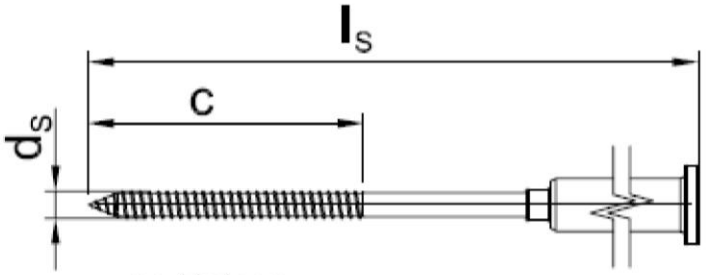
weber.therm SRD-5 / use category A, B, C, D / mounting flushed at the surface





Marking:
Anchor type (e.g. weber.therm S)
Length of anchor (e.g. 135)
Use category (A,B,C,D,E)



moulded screw

Table A 1: Dimensions

Anchor Type	Anchor Sleeve			Specific screw		
	d_{nom} [mm]	h_{ef} [mm]	min L_a max L_a [mm]	d_s [mm]	c [mm]	min l_s max l_s [mm]
weber.therm SRD-5	8	25	115 295	5,5	60	115 295

Determination of maximum thickness of insulation h_D [mm] weber.therm SRD-5:

$h_D = L_a - t_{tol} - h_{ef}$ (L_a = e.g. 215; t_{tol} = 10)

e.g. $h_D = 215 - 10 - 25$

$h_{Dmax} = 180$

weber.therm SRD-5 and weber.therm SLD-5

Product description
weber.therm SRD-5 - Marking and dimensions, use category: A, B, C, D
mounting flushed at the surface

Annex A 2

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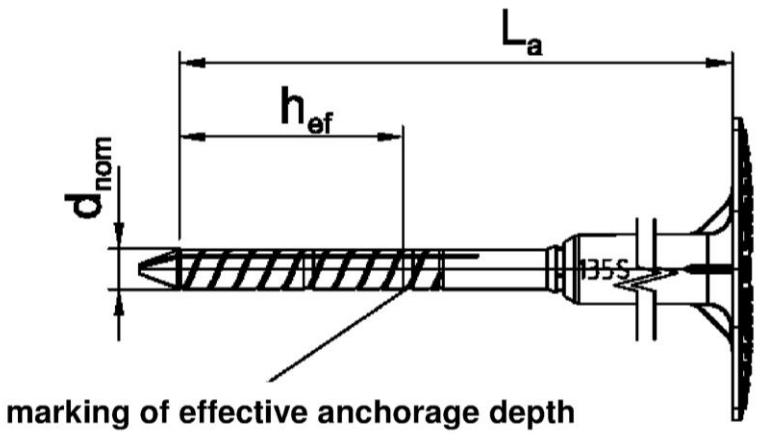
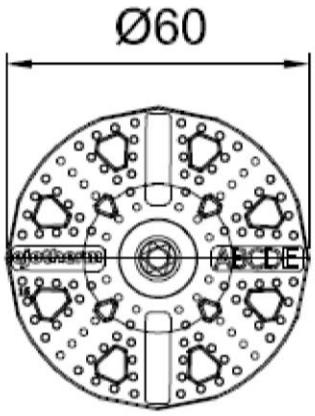
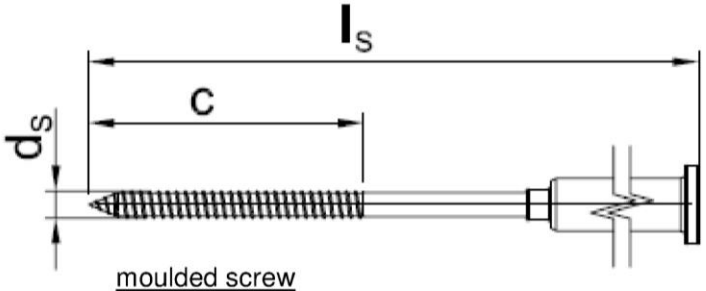
weber.therm SRD-5 / use category E / mounting flushed at the surface



marking of effective anchorage depth



Marking:
Anchor type (e.g. weber.therm S)
Length of anchor (e.g. 135)
Use category (A,B,C,D,E)



moulded screw

Table A 2: Dimensions

Anchor Type	Anchor Sleeve			Specific screw		
	d_{nom} [mm]	h_{ef} [mm]	min L_a max L_a [mm]	d_s [mm]	c [mm]	min l_s max l_s [mm]
weber.therm SRD-5	8	45	115 295	5,5	60	115 295

Determination of maximum thickness of insulation h_D [mm] weber.therm SRD-5:

$h_D = L_a - t_{tol} - h_{ef}$ (L_a = e.g. 215; t_{tol} = 10)

e.g. $h_D = 215 - 10 - 45$

$h_{Dmax} = 160$

weber.therm SRD-5 and weber.therm SLD-5	**Annex A 3**
Product description weber.therm SRD-5 - Marking and dimensions, use category: E mounting flushed at the surface	

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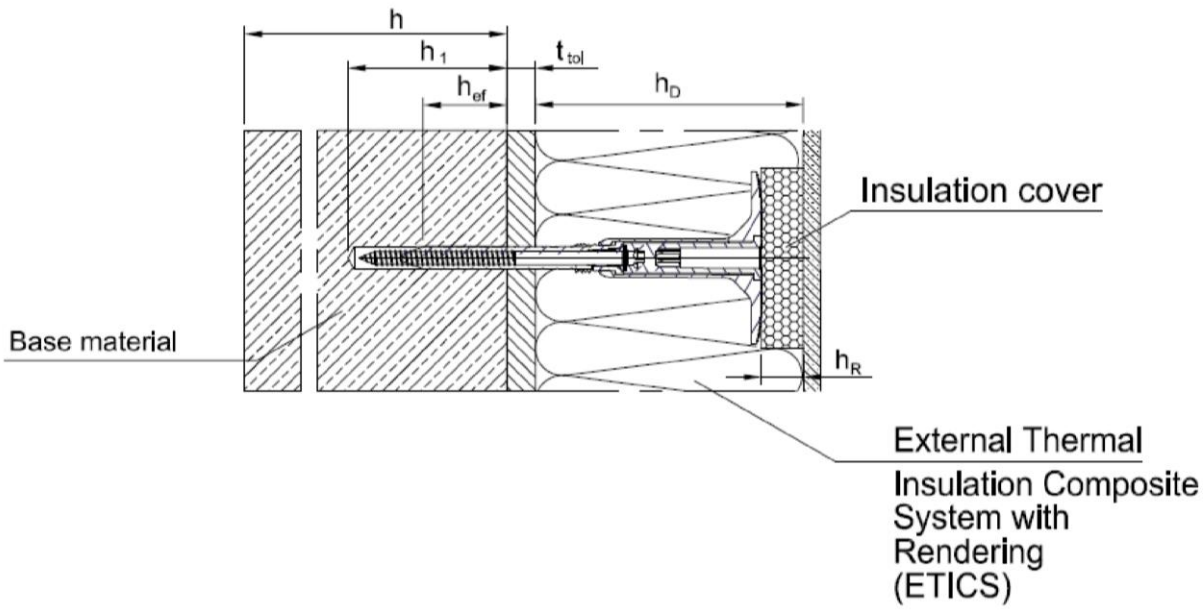
weber.therm SRD-5, countersunk into insulation



Intended use

- Anchorage of ETICS in concrete and masonry
- Anchorage of ETICS in autoclaved aerated concrete and lightweight aggregate concrete

Legend:
- h_D = thickness of insulation material
- h_{ef} = effective anchorage depth
- h = thickness of member (wall)
- h_1 = depth of drilled hole to deepest point
- h_R = thickness insulation cover
- t_{tol} = thickness of equalizing layer or non-load-bearing coating

weber.therm SRD-5 and weber.therm SLD-5	**Annex A 4**
Product description Installed condition weber.therm SRD-5, countersunk into insulation	

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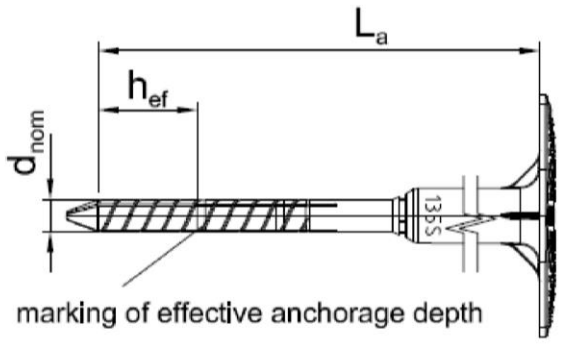
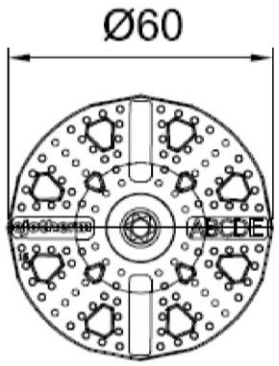
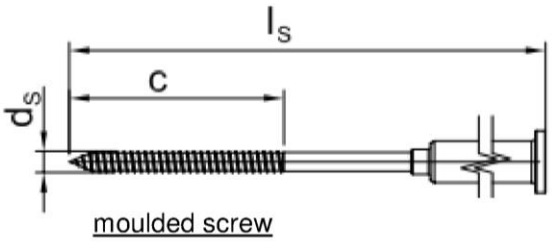
weber.therm SRD-5 / use category A, B, C, D / countersunk into insulation

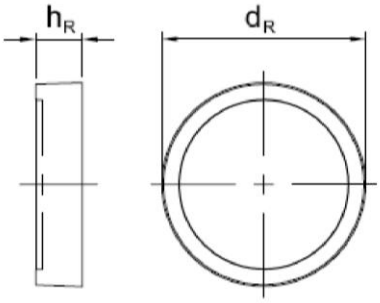




Marking:
Anchor type (weber.therm S)
Anchor length (z. B. 135)
Use category (A,B,C,D,E)



Insulation cover



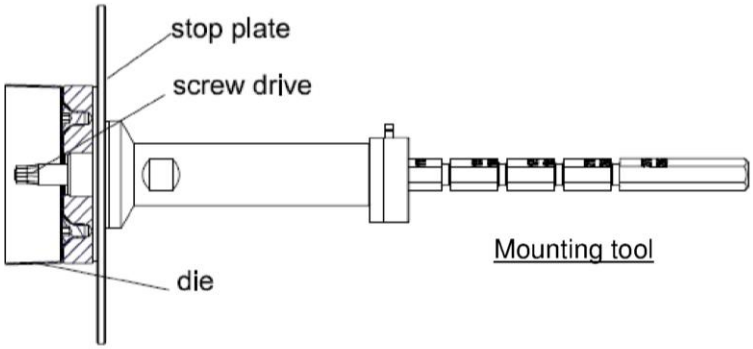


Table A 3: Dimensions

Anchor type	Anchor sleeve			Specific screw			Insulation cover	
	d_{nom} [mm]	h_{ef} [mm]	min L_a max L_a [mm]	d_s [mm]	c [mm]	min l_s max l_s [mm]	h_R	d_R
weber.therm SRD-5	8	25	115 - 295	5,5	60	115 - 295	15	65

Determination of maximum thickness of insulation h_D [mm] weber.therm SRD-5:

$h_D = L_a - t_{tol} - h_{ef}$ (L_a = e.g. 215; t_{tol} = 10)

e.g. $h_D = 215 - 10 - 25$

$h_{Dmax} = 180$

weber.therm SRD-5 and weber.therm SLD-5

Annex A 5

Product description
weber.therm SRD-5 - Marking and dimensions, mounting tool
use category: A,B,C,D, countersunk into insulation

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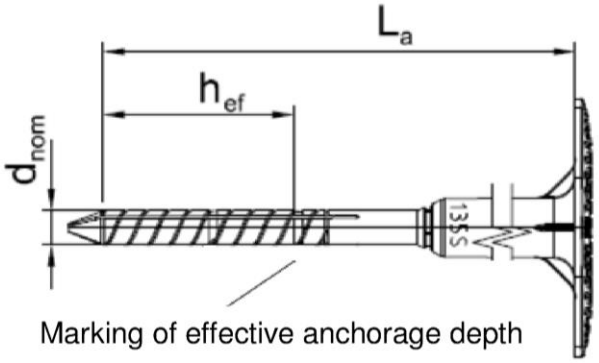
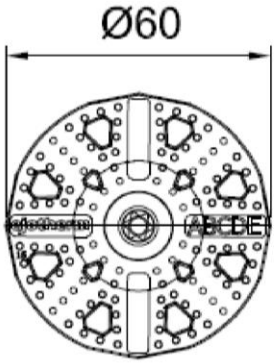
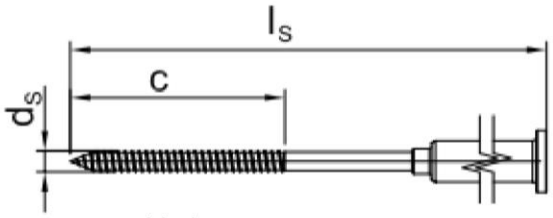
weber.therm SRD-5 / use category E / countersunk into insulation



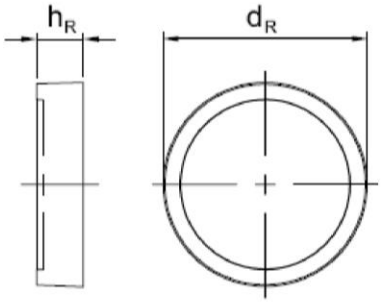


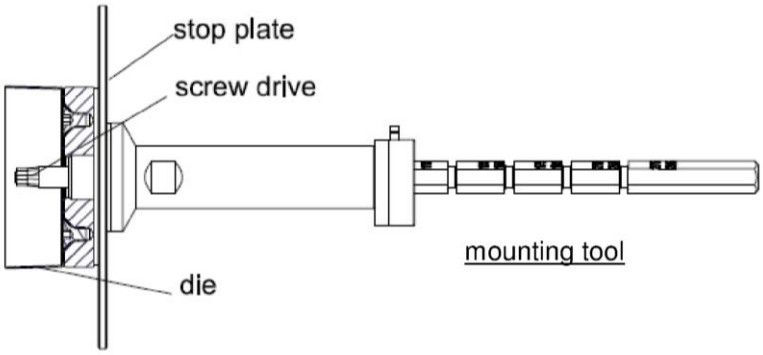
Marking:
Anchor type (weber.therm S)
Anchor length (z. B. 135)
Use category (A,B,C,D,E)



moulded screw

Insulation cover





mounting tool

Table A 3: Dimensions

Anchor type	Anchor sleeve			Specific screw			Insulation cover	
	d_{nom} [mm]	h_{ef} [mm]	min L_a max L_a [mm]	d_s [mm]	c [mm]	min l_s max l_s [mm]	h_R	d_R
weber.therm SRD-5	8	45	115 - 295	5,5	60	115 - 295	15	65

Determination of maximum thickness of insulation h_D [mm] weber.therm SRD-5:

$h_D = L_a - t_{tol} - h_{ef}$ (L_a = e.g. 215; t_{tol} = 10)

e.g. $h_D = 215 - 10 - 45$

$h_{Dmax} = 160$

weber.therm SRD-5 and weber.therm SLD-5

Product description
weber.therm SRD-5 - Marking and dimensions, mounting tool
use category: E, countersunk into insulation

Annex A 6

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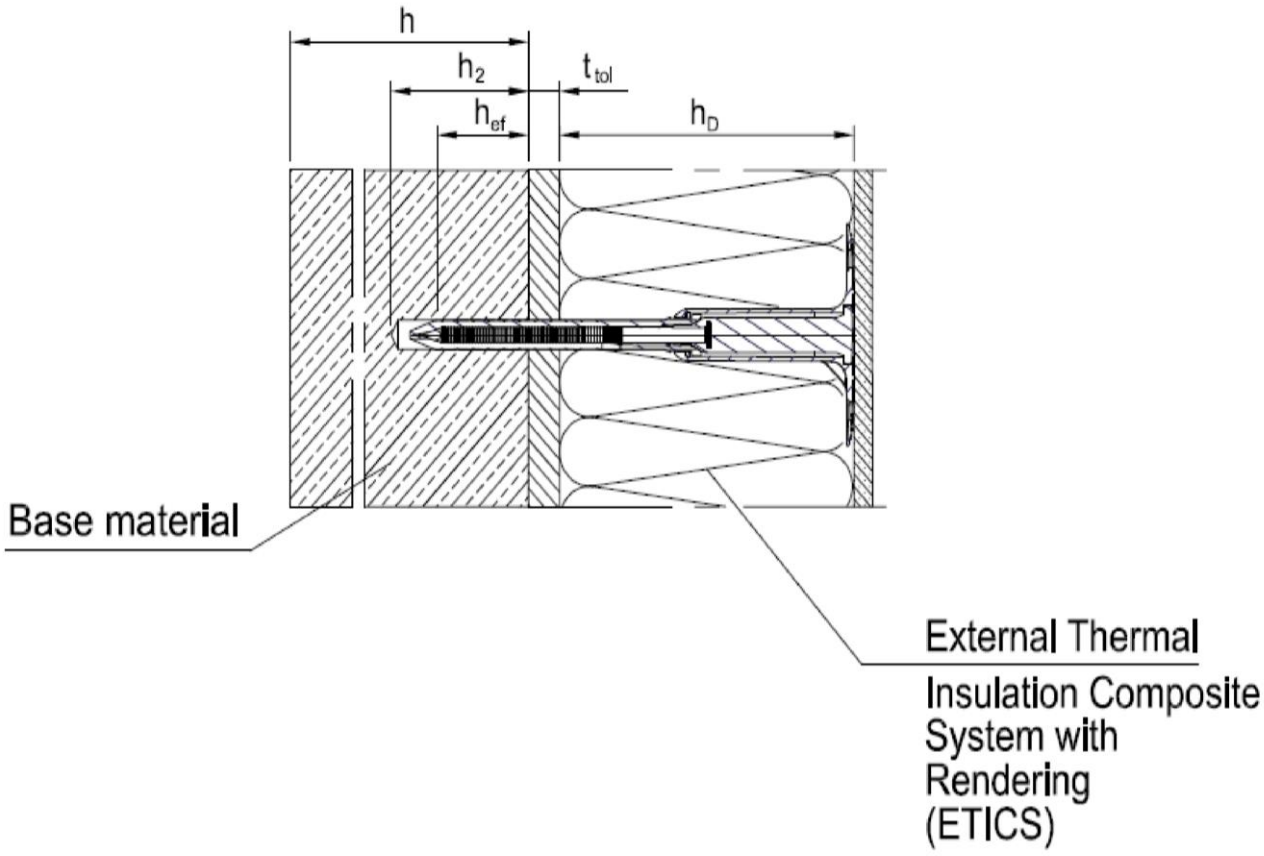
weber.therm SLD-5, flushed at the surface



Intended use

- Anchorage of ETICS in concrete and masonry
- Anchorage of ETICS in autoclaved aerated concrete and lightweight aggregate concrete

Legend:
h_D = thickness of insulation material
h_{ef} = effective anchorage depth
h = thickness of member (wall)
h_2 = depth of drilled hole to deepest point
t_{tol} = thickness of equalizing layer or non-load-bearing coating

weber.therm SRD-5 and weber.therm SLD-5	**Annex A 7**
Product description Installed condition weber.therm SLD-5, flushed at the surface	

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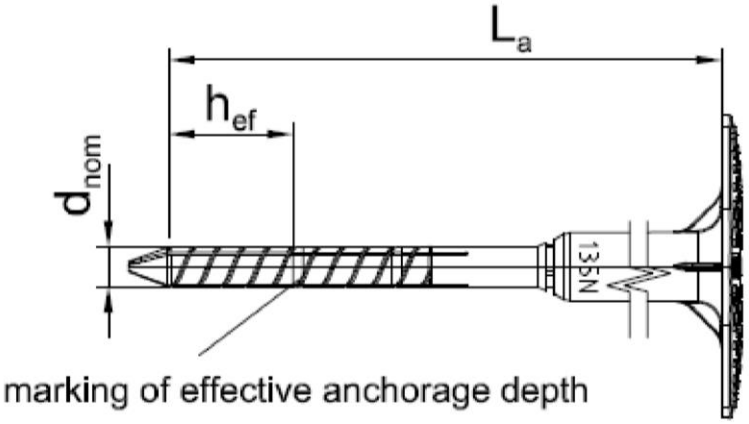
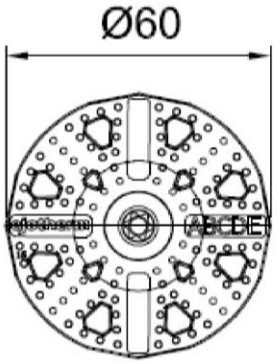
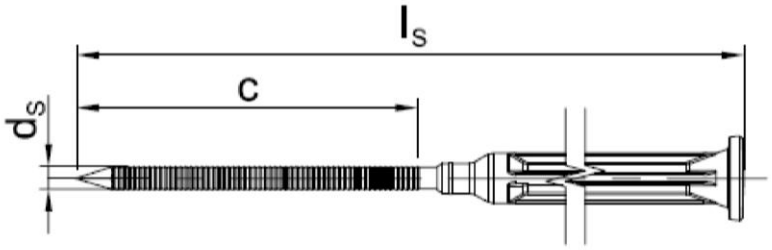
weber.therm SLD-5 / use category A,B,C,D / mounting flushed at the surface





Marking:
Anchor type (weber.therm N)
Anchor length (z. B. 135)
Use category (A,B,C,D,E)



specific nail

Table A 5: Dimensions

Anchor Type	Anchor Sleeve			Specific nail		
	d_{nom} [mm]	h_{ef} [mm]	min L_a max L_a [mm]	d_n [mm]	c [mm]	min l_n max l_n [mm]
weber.therm SLD-5	8	25	95 -295	4,13	60	95 - 295

Determination of maximum thickness of insulation h_D [mm] weber.therm SLD-5:

$h_D = L_a - t_{tol} - h_{ef}$ (L_a = e.g. 215; t_{tol} = 10)

e.g. $h_D = 215 - 10 - 25$

$h_{Dmax} = 180$

weber.therm SRD-5 and weber.therm SLD-5	**Annex A 8**
Product description weber.therm SLD-5 - Marking and dimensions, use category: A,B,C,D mounting flushed at the surface	

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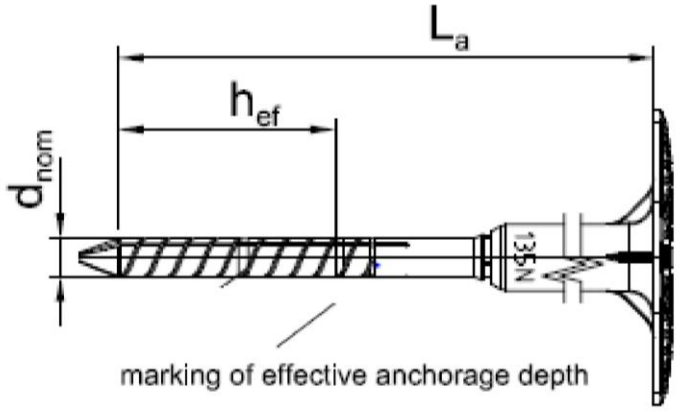
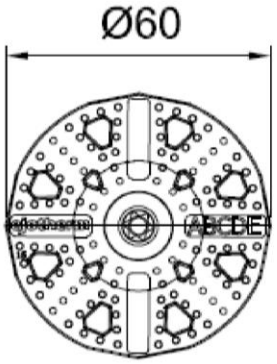
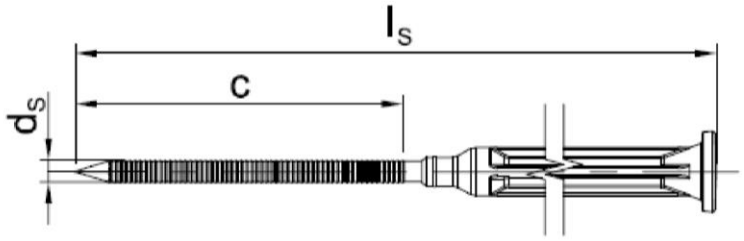
weber.therm SLD-5 / use category E / mounting flushed at the surface





Marking:
Anchor type (weber.therm N)
Anchor length (z. B. 135)
Use category (A,B,C,D,E)



specific nail

Table A 5: Dimensions

Anchor Type	Anchor Sleeve			Specific nail		
	d_{nom} [mm]	h_{ef} [mm]	min L_a max L_a [mm]	d_n [mm]	c [mm]	min l_n max l_n [mm]
weber.therm SLD-5	8	45	95 295	4,13	60	95 295

Determination of maximum thickness of insulation h_D [mm] weber.therm SLD-5:

$h_D = L_a - t_{tol} - h_{ef}$ (L_a = e.g. 215; t_{tol} = 10)

e.g. $h_D = 215 - 10 - 45$

$h_{Dmax} = 160$

weber.therm SRD-5 and weber.therm SLD-5	**Annex A 9**
Product description weber.therm SLD-5 - Marking and dimensions, use category: E mounting flushed at the surface	

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Table A7: Materials weber.therm SRD-5 and SLD-5	
Anchor sleeve	virgin Polyethylene, PE-HD, colour: grey
Anchor plate	virgin Polyethylene, PE-HD, colour: yellow
Plastic moulding of the screw	Polyamide, PA GF 50, colours: beige, yellow, green, white, orange, brown, blue, red, grey
Plastic moulding of the nail	Polyamide, PA GF 50, colours: beige, yellow, green, white, orange, brown, blue, red, grey
Insulation cover	Polystyrene EPS 20
	Mineralwool HD
Specific screw for weber.therm SRD-5	Steel 5.8, electro galvanized ≥ 5 µm according to EN ISO 4042:1999, blue passivated
	Stainless steel, according to ISO 3506 material number 1.4401 or 1.4571 material number 1.4301 or 1.4567
Specific nail for weber.therm SLD-5	Steel, electro galvanized ≥ 5 µm according to EN ISO 4042:1999, blue passivated, f_{yk} ≥ 670 N/mm²

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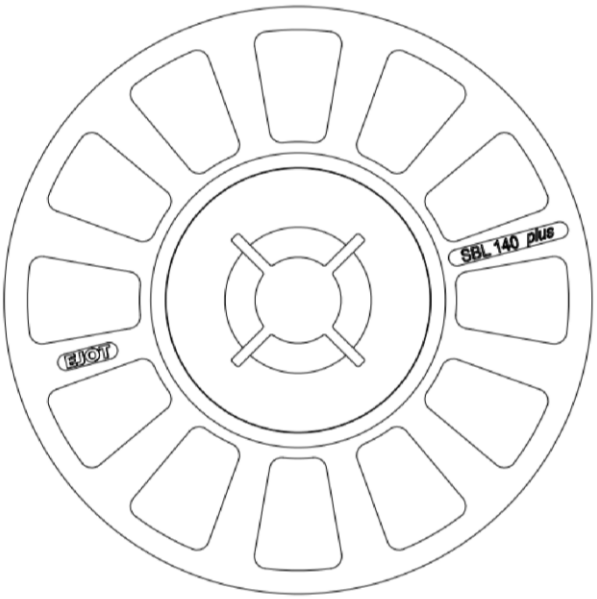
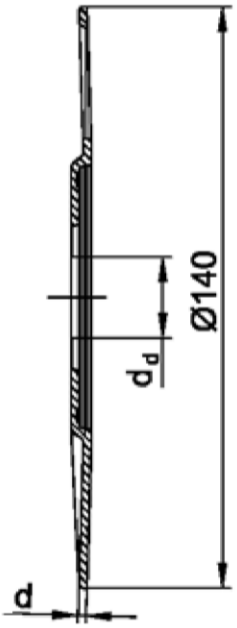
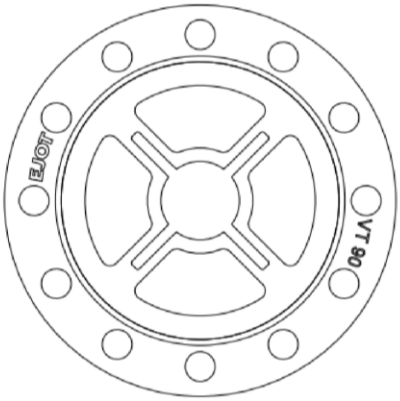
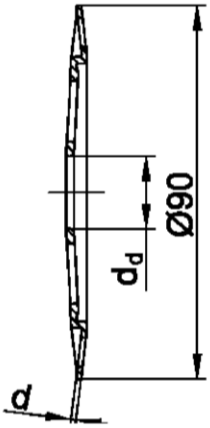
weber.therm SRD-5 and weber.therm SLD-5





SBL 140 plus	
colour	nature
d_d [mm]	20,0
d [mm]	2,0
Material	1) 2)





VT 90	
colour	nature
d_d [mm]	17,5
d [mm]	1,2
Material	1) 2)

1) Polyamide, PA 6
2) Polyamide, PA GF 50

weber.therm SRD-5 and weber.therm SLD-5	**Annex A 11**
Product description Slip on plates with weber.therm SRD-5 and weber.therm SLD-5	

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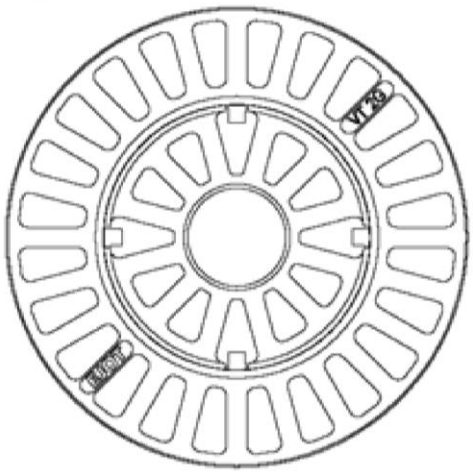
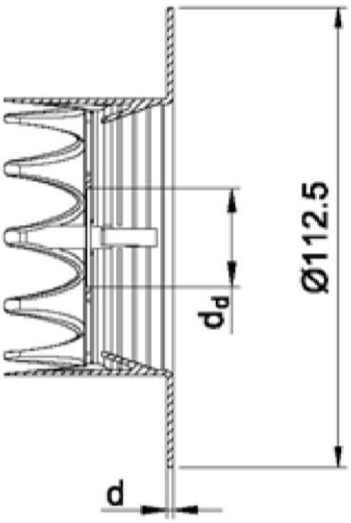
weber.therm SRD-5

VT 2G





VT 2G	
colour	nature
d_d [mm]	29,0
d [mm]	1,5
Material	1)

1) Polyamide, PA GF 50

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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 thermal insulation composite system.

Base materials:

- Normal weight concrete (use category A) according to Annex C1.
- Solid masonry (use category B), according to Annex C1.
- Hollow or perforated masonry (use category C), according to Annex C1.
- Lightweight aggregate concrete (use category D), according to Annex C1.
- autoclaved aerated concrete (use category E), according to Annex C1.
- For other base materials of the use categories A, B, C, D or E the characteristic resistance of the anchor may be determined by job site tests according to EOTA Technical Report TR 051 edition December 2016.

Temperature Range:

- 0°C to +40°C (max. short term temperature +40°C and max. long term temperature +24°C)

Design:

- The anchorages are designed under the responsibility of an engineer experienced in anchorages and masonry work with the partial safety factors γ_M = 2,0 and γ_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 anchor is indicated on the design drawings.
- Fasteners are only to be used for multiple fixings of thermal insulation composite systems.

Installation:

- Hole drilling by the drill modes according to Annex C1.
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of 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

weber.therm SRD-5 and weber.therm SLD-5	**Annex B 1**
Intended use Specifications	

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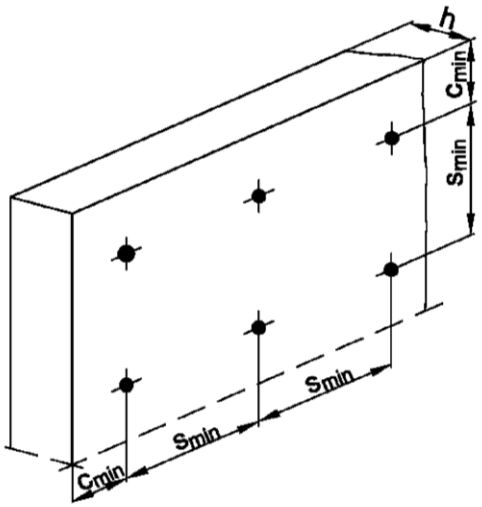
Table B1: Installation parameters					
Anchor type		weber.therm SLD-5		weber.therm SRD-5	
		A B C D	E	A B C D	E
Drill hole diameter	d_0 [mm] =	8	8	8	8
Cutting diameter of drill bit	d_{cut} [mm] ≤	8,45	8,45	8,45	8,45
Depth of drill hole to deepest point					
- deep mounting ≥	h_1 [mm]			50	70
- mounting on the surface ≥	h_1 [mm]	35	55	35	55
Effective anchorage depth	h_{ef} [mm] ≥	25	45	25	45

Table B2: Anchor distances and dimensions of members		
Anchor type		weber.therm SRD-5 / weber.therm SLD-5
Minimum allowable spacing	s_{min} ≥ [mm]	100
Minimum allowable edge distance	c_{min} ≥ [mm]	100
Minimum thickness of member		
- deep mounting	h ≥ [mm]	100
		40 (only skins of concrete)
- mounting on the surface	h ≥ [mm]	100
		40 (only skins of concrete)

Scheme of distance and spacing



weber.therm SRD-5 and weber.therm SLD-5

Intended use
Installations parameters,
Edge distances and spacing

Annex B 2

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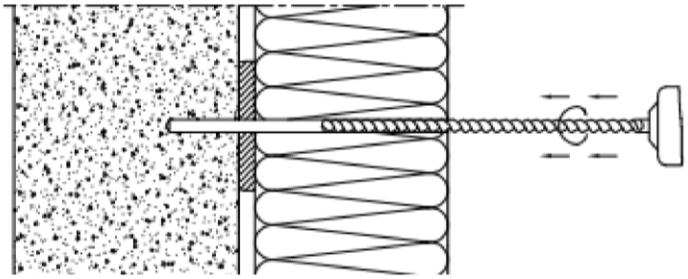
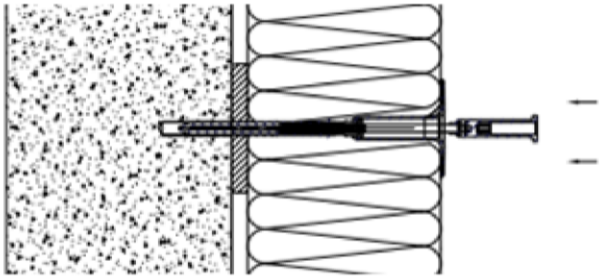
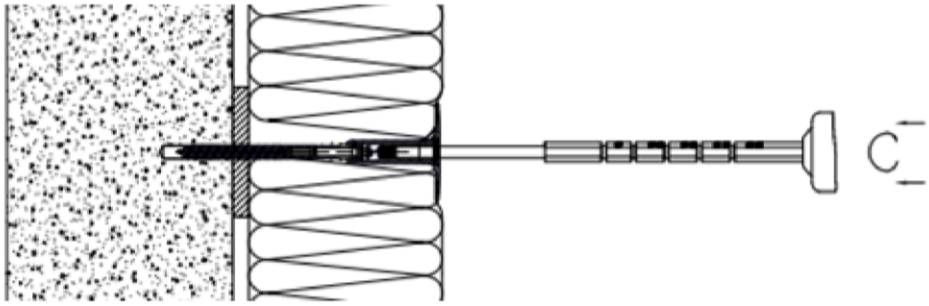
Installation instructions: weber.therm SRD-5 / flushed at the surface



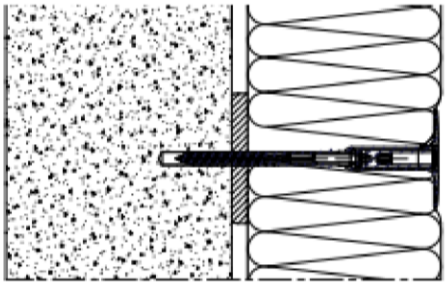
Drill the hole perpendicular to the substrate surface.
Clean the drill hole 3x.



Place the anchor into the drill hole. The bottom side of the plate must be flush with the ETICS.



Drill the specific screw into the anchor.



Installed condition of weber.therm SRD-5.

weber.therm SRD-5 and weber.therm SLD-5	**Annex B 3**
Intended use Installation instructions weber.therm SRD-5, flushed at the surface	

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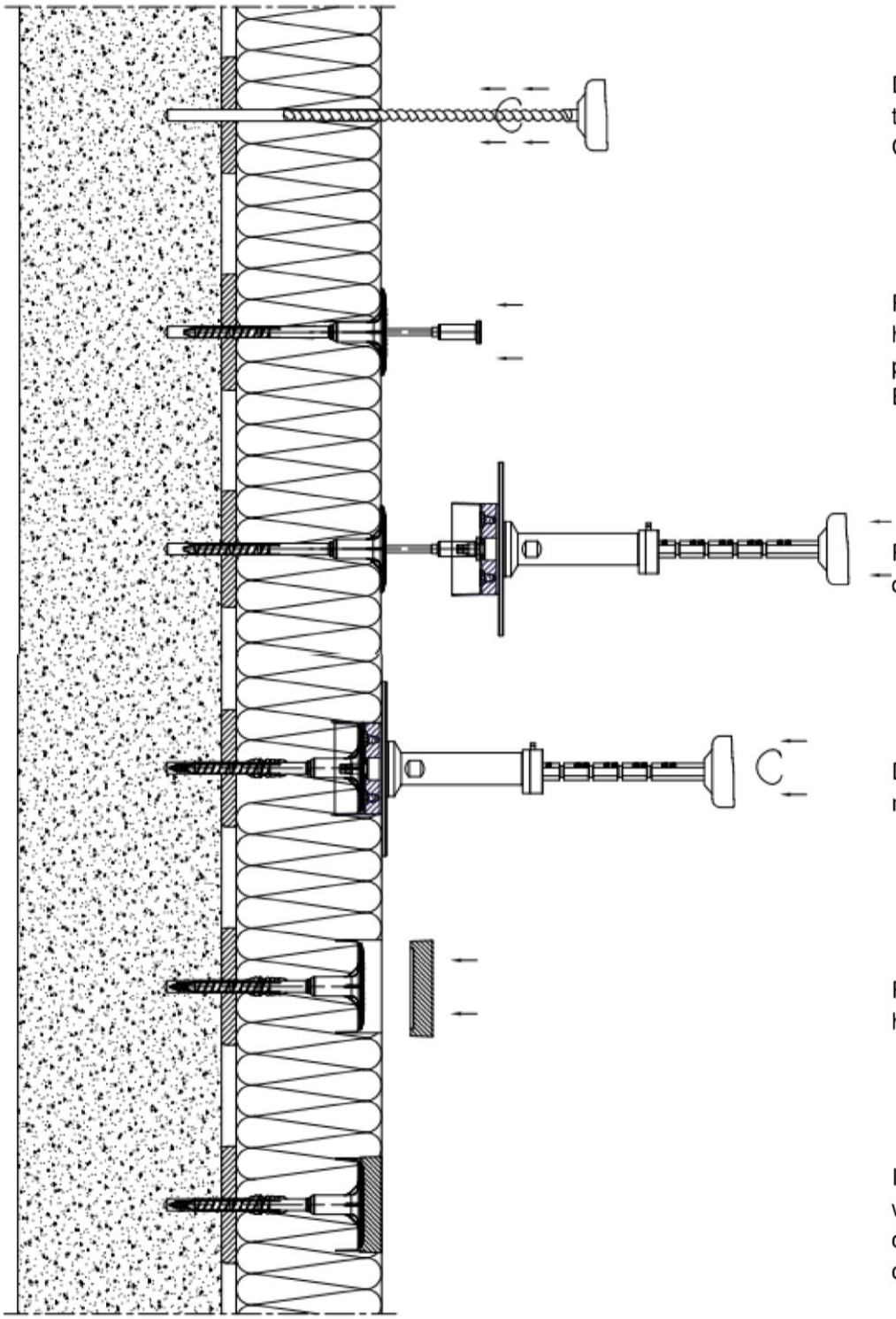
Installation instructions: weber.therm SRD-5 / countersunk into insulation



Drill the hole perpendicular to the substrate surface.
Clean the drill hole 3x.

Place the anchor into the drill hole.The bottom side of the plate must be flush with the ETICS.

Put the mounting tool into the drive unit.

Drill the specific screw with the mounting tool into the anchor.

Put the insulation cover into the hole from the insulation

Installed condition of weber.therm SRD-5, countersunk with insulation cover.

weber.therm SRD-5 and weber.therm SLD-5	**Annex B 4**
Intended use Installation instructions weber.therm SRD-5, countersunk into insulation	

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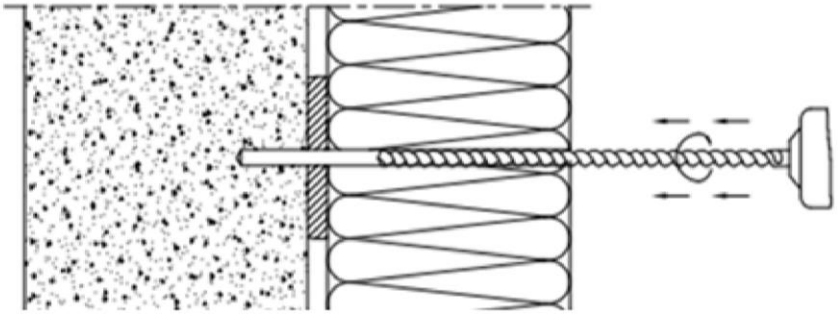
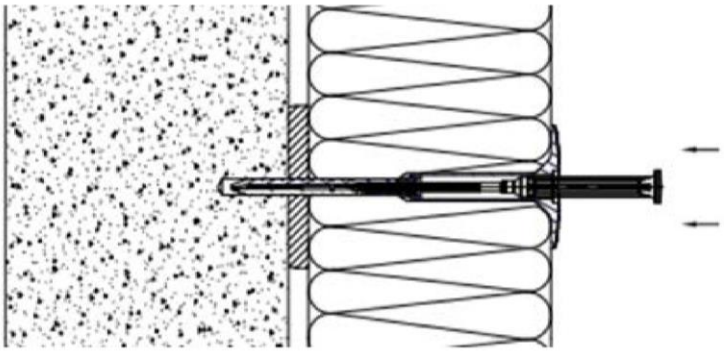
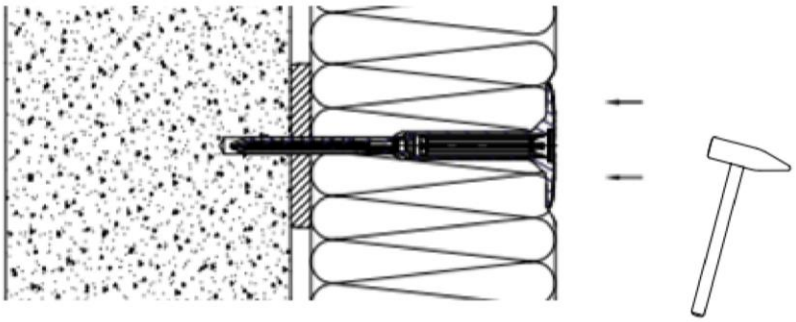
Installation instructions: weber.therm SLD-5 / mounting flushed at the surface



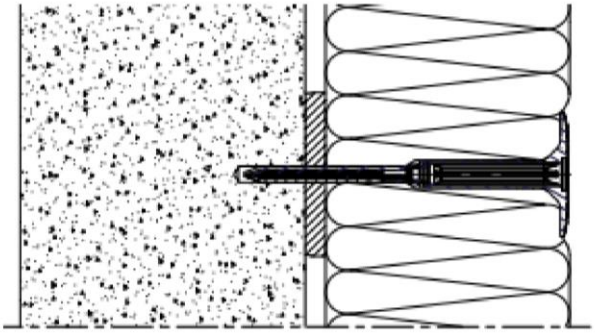
Drill the hole perpendicular to the substrate surface.
Clean the drill hole 3x.



Place the anchor into the drill hole. The bottom side of the plate must be flush with the ETICS.



Drive in the specific nail with the hammer into the sleeve



Installed condition of weber.therm SLD-5, flushed at the surface

weber.therm SRD-5 and weber.therm SLD-5	**Annex B 5**
Intended use Installation instructions weber.therm SLD-5, flushed at the surface	

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Table C1: Characteristic resistance to tension loads N_{Rk} in concrete an masonry for a single anchor in kN

Anchor type					weber.therm SLD-5	weber.therm SRD-5
Base materials	Bulk density ρ [kg/dm³]	minimum compressive strength f_b [N/mm²]	General remarks	Drill method	N_{Rk} [kN]	N_{Rk} [kN]
Concrete C12/15 EN 206-1:2000				hammer	0,75	0,9
Concrete C20/25 – C50/60 EN 206-1:2000				hammer	1,2	1,5
Concrete C20/25 – C50/60 Thin members EN 206-1:2000 (thin members)			Thickness of the skin 100 mm > h ≥ 40 mm	hammer	1,2	1,5
Clay bricks, Mz e.g. according to EN 771-1:2011	≥ 1,8	36	Vertically perforation up to 15 %.	hammer	1,5	1,5
Sand-lime solid bricks, KS e.g. according to EN 771-2:2011	≥ 1,8	16	Vertically perforation up to 15 %.	hammer	1,5	1,5
Vertically perforated clay bricks, HLz e.g. according to EN 771-1:2011	≥ 1,4	16	Vertically perforation ≥ 15 % and ≤ 50 %. Outer web thickness ≥ 14 mm	rotary	0,9 [1)]	1,5 [1)]
Sand-lime perforated bricks, KSL e.g. according to EN 771-2:2011	≥ 1,4	12	Vertically perforation ≥ 15 %. Outer web thickness ≥ 20 mm	rotary	0,9 [2)]	1,5 [2)]
Lightweight concrete hollow blocks; Hbl e.g. according to EN 771-3:2011	≥ 0,9	4	Vertically perforation ≥ 15 %. Outer web thickness ≥ 30 mm	rotary	0,6 [3)]	1,2 [3)]
Lightweight aggregate concrete LAC 8 – LAC 25 e.g. according to EN 771-3:2011-07	≥ 1,2	8		hammer	0,6	0,75
Autoclaved aerated concrete AAC4 – AAC 7 e.g. according to EN 771-4:2011	≥ 0,55	4		rotary	0,75	0,75

1) The value applies only for outer web thickness ≥ 14 mm; otherwise the characteristic resistance shall be determined by job site pull-out tests.
2) The value applies only for outer web thickness ≥ 20 mm; otherwise the characteristic resistance shall be determined by job site pull-out tests.
3) The value applies only for outer web thickness ≥ 30 mm; otherwise the characteristic resistance shall be determined by job site pull-out tests

weber.therm SRD-5 and weber.therm SLD-5

Performances
Characteristic resistance

Annex C 1

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Table C2: Point thermal transmittance according EOTA Technical Report TR 025:2016-05		
anchor type	insulation thickness h_D [mm]	point thermal transmittance χ [W/K]
weber.therm SLD-5	60 – 260	0,001
weber.therm SRD-5, countersunk	80 – 260	0,001
weber.therm SRD-5, flushed	80 – 260	0,002

Table C3: Plate stiffness according EOTA Technical Report TR 026:2016-05			
anchor type	diameter of the anchor plate [mm]	load resistance of the anchor plate [kN]	plate stiffness [kN/mm]
weber.therm SRD-5 and SLD-5	60	2,1	0,7

Table C4: Displacements

Base materials	Bulk density ρ [kg/dm³]	Min. compressive strength f_b [N/mm²]	Tension Load N [kN] weber.therm SLD-5 / SRD-5	Displacements $\delta_{(N)}$ [mm]	
				weber.therm SLD-5	weber.therm SRD-5
Concrete C20/25 – C50/60 (EN 206-1:2000)			0,4 / 0,5	0,4	0,4
Clay bricks, Mz (EN 771-1:2011)	≥ 1,8	36	0,5 / 0,5	0,3	0,3
Sand-lime solid bricks, KS (EN 771-2:2011)	≥ 1,8	16	0,5 / 0,5	0,4	0,4
Vertically perforated clay bricks, HLz (EN 771-1:2011)	≥ 1,4	16	0,3 / 0,5	0,2	0,4
Sand-lime perforated bricks, KSL (EN 771-2:2011)	≥ 1,4	12	0,3 / 0,5	0,3	0,3
Lightweight concrete hollow blocks, Hbl (EN 771-3:2011)	≥ 0,9	4	0,2 / 0,4	0,2	0,2
Lightweight aggregate concrete, LAC 8 – LAC 25 (EN 771-3:2011)	≥ 1,2	8	0,2 / 0,25	0,2	0,2
Autoclaved aerated concrete, AAC 4 – AAC 7 (EN 771-4:2011)	≥ 0,55	4	0,25 / 0,25	0,3	0,3

weber.therm SRD-5 and weber.therm SLD-5

Performances
Point thermal transmittance, plate stiffness and displacements

Annex C 2