Deutsches Institut für Bautechnik

Public-law institution jointly founded by the federal states and the Federation

European Technical Assessment Body for construction products

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

European Technical Assessment ETA-15/0011 of 28 January 2025

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	Capatect Schraubdübel Rondelle
Product family to which the construction product belongs	Plastic anchor for fixing of external thermal insulation composite systems with rendering
Manufacturer	Synthesa Chemie Gesellschaft m.b.H Dirnbergerstraße 29-31 4320 PERG ÖSTERREICH
Manufacturing plant	DAW manufacturing plant 10182
This European Technical Assessment contains	18 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
This version replaces	ETA-15/0011 issued on 29 January 2015

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Specific Part

1 Technical description of the product

The screwed-in anchor Capatect Schraubdübel Rondelle consists of a plastic part made of polyethylene (virgin material) and an accompanying specific screw of galvanized steel or stainless steel and an anchor cap made of polystyrene (for mounting the anchor on the surface of the insulating material) or an insulation cover made of polystyrene or mineral wool (for deep mounting of the anchor in the insulating material).

For mounting on the surface the anchor may additionally be combined with the anchor plates SBL 140 plus, VT 90 and 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 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 - Minimum edge distance and spacing	 See Annex C 1 See Annex B 2
Displacements	See Annex C 2
Plate stiffness	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 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.

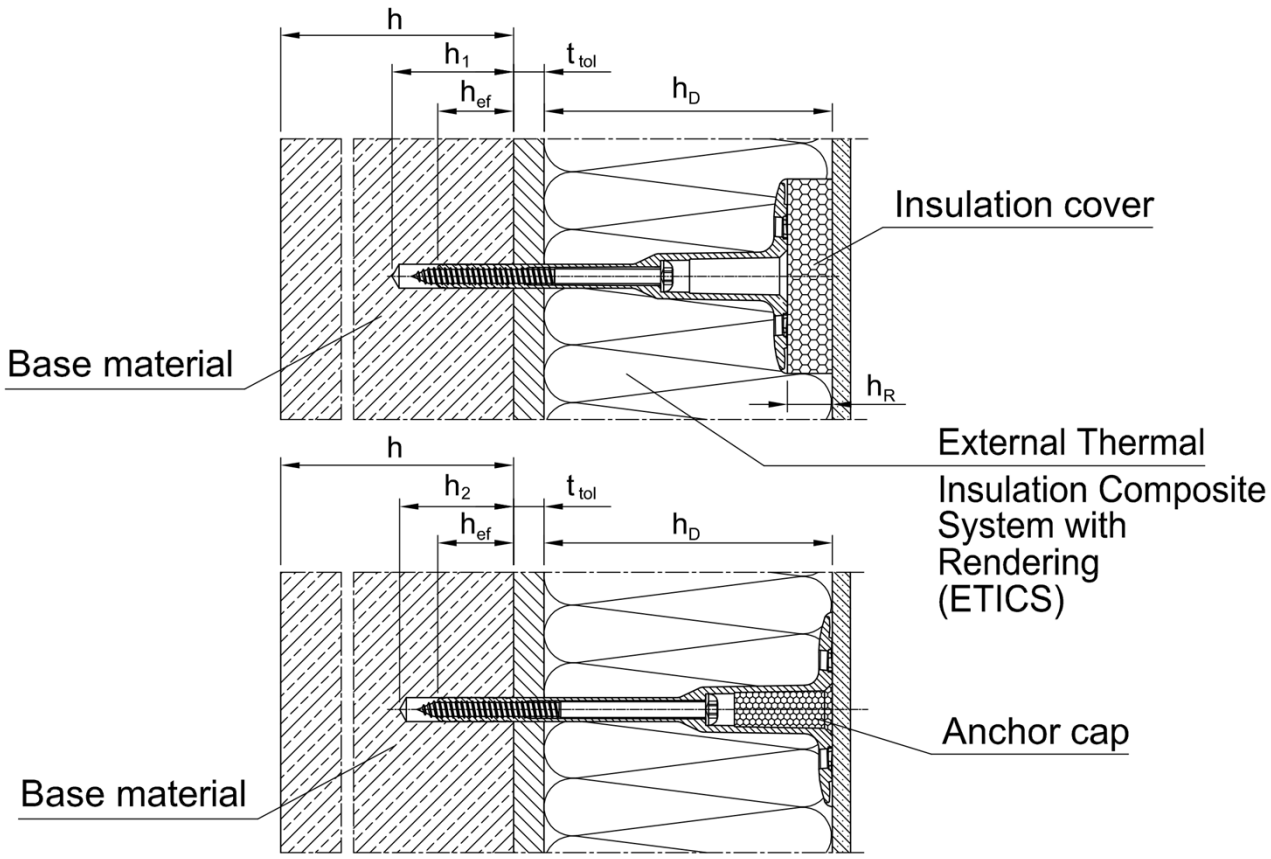
Issued in Berlin on 28 January 2025 by Deutsches Institut für Bautechnik

Dipl.-Ing. Beatrix Wittstock
Head of Section

beglaubigt:
Ziegler

Deutsches Institut für Bautechnik DIBt

Capatect Schraubdübel Rondelle



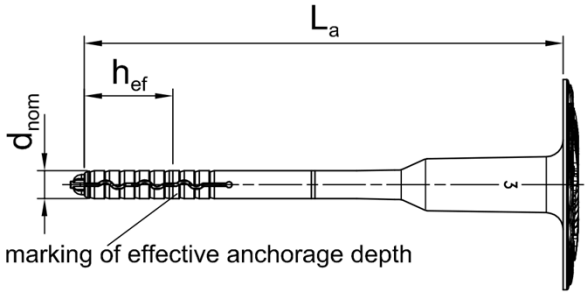
Intended use

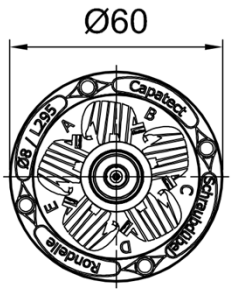
- Anchorage of ETICS in concrete and masonry
- Anchorage of ETICS in autoclaved aerated concrete

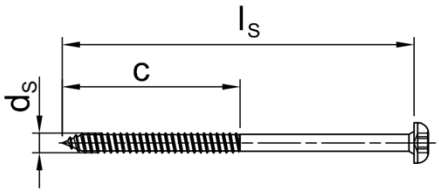
Legend:
- h_D = thickness of insulation material
- h_{ef} = effective anchorage depth
- h = thickness of member (wall)
- $h_{1,2}$ = depth of drilled hole to deepest point
- h_R = thickness of insulation cover
- t_{tol} = thickness of equalizing layer or non-load-bearing coating

Capatect Schraubdübel Rondelle	**Annex A 1**
Product description Installed condition	

Components for deep mounting in base material group A, B, C, D

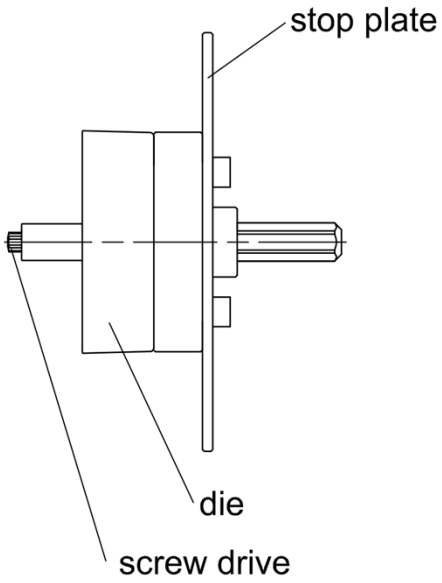




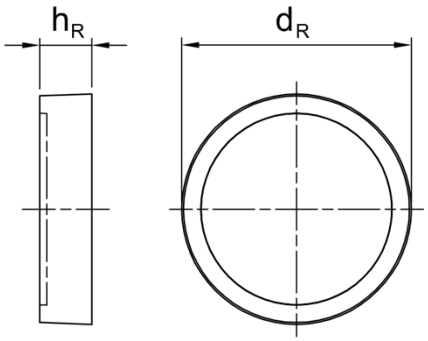


Marking:
Identifying mark (Capatect)
Anchor type (Schraubdübel Rondelle Ø8)
Length of anchor (e.g. L295)
Base material group (A, B, C, D, E)

CSR-Installation tool



Insulation cover



Capatect Schraubdübel Rondelle	**Annex A 2**
Product description Components for deep mounting, base material group A, B, C, D – Capatect Schraubdübel Rondelle, Installation tool	

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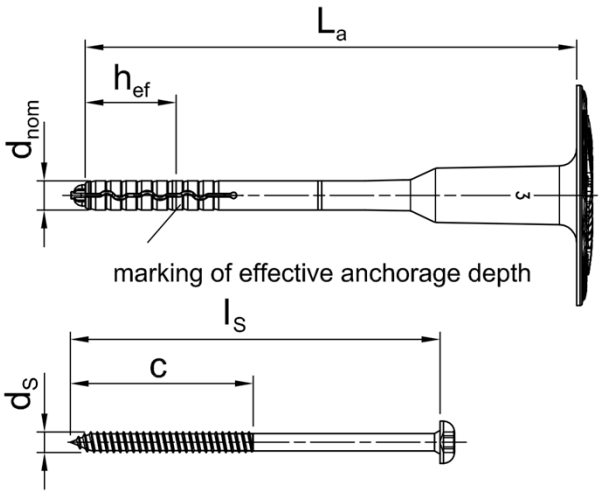
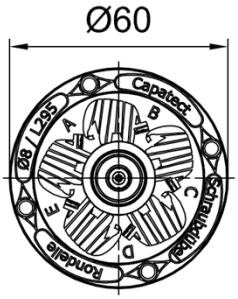
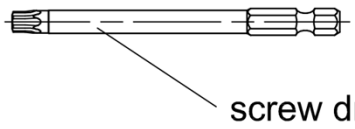
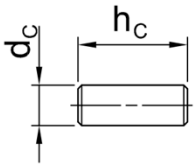
Components for mounting on the surface in base material group A, B, C, D





Marking:
Identifying mark (Capatect)
Anchor type (Schraubdübel Rondelle Ø8)
Length of anchor (e.g. L295)
Base material group (A, B, C, D, E)





Anchor cap (to lock up the anchor in case of mounting on the surface)

Table A1: Dimensions

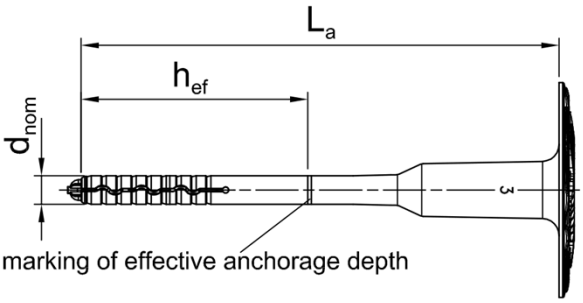
Measures in mm

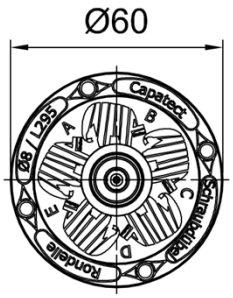
Anchor Typ	Colour	Anchor sleeve				Accompanying Specific screw				Anchor cap		Insulation cover	
		d_{nom}	h_{ef}	min L_a	max L_a	d_s	c	min l_s	max l_s	h_c	d_c	h_R	d_R
Capatect Schraub-dübel Rondelle	orange	8	25	115	295	5,5	60	78	258	23	15	15	66

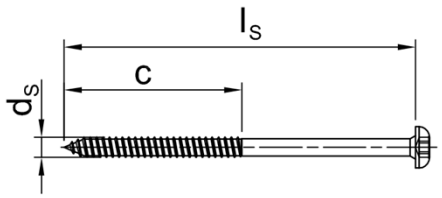
Determination of maximum thickness of insulation h_D for Capatect Schraubdübel Rondelle:
h_D = L_a - t_{tol} - h_{ef} (L_a = e.g. 115; t_{tol} = 10)
e.g. = h_D = 115 – 10 – 25
$h_{Dmax.}$ = 80

Capatect Schraubdübel Rondelle	**Annex A 3**
Product description Components for mounting on the surface, base material group A, B, C, D – Capatect Schraubdübel Rondelle, Installation tool, Dimensions	

Components for deep mounting in base material group E

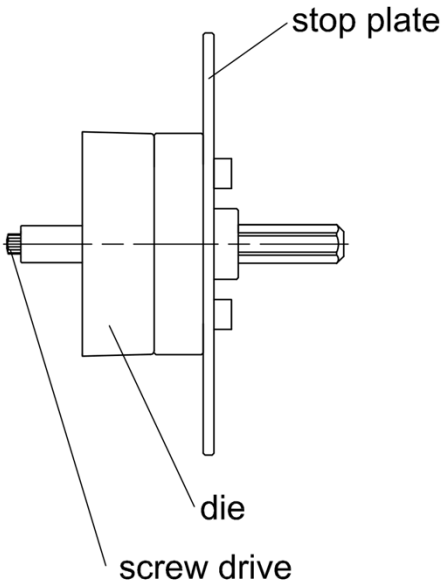




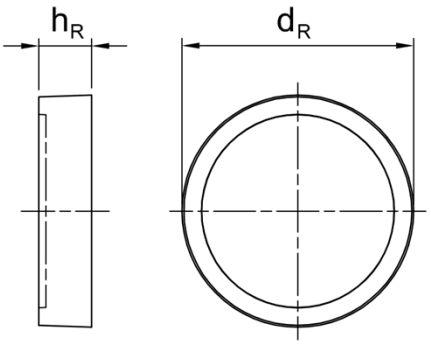


Marking:
Identifying mark (Capatect)
Anchor type (Schraubdübel Rondelle Ø8)
Length of anchor (e.g. L295)
Base material group (A, B, C, D, E)

CSR-Installation tool

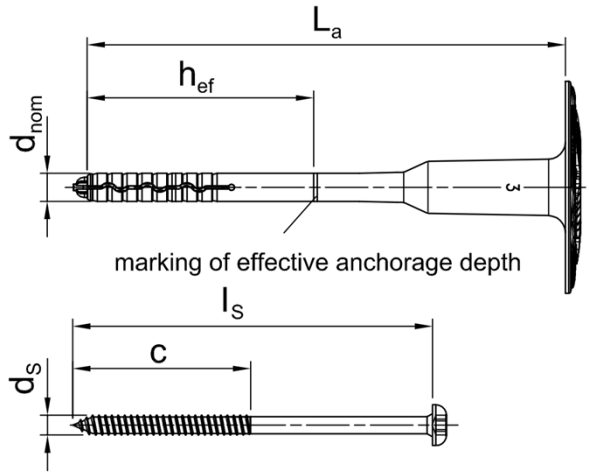


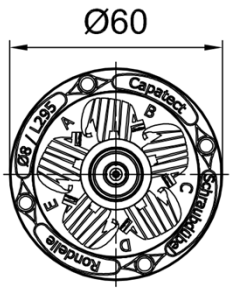
Insulation cover



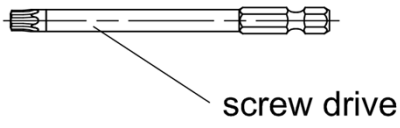
Capatect Schraubdübel Rondelle	**Annex A 4**
Product description Components for deep mounting, base material group E – Capatect Schraubdübel Rondelle, Installation tool	

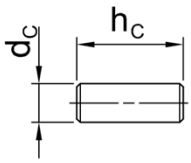
Components for mounting on the surface in base material group E





Marking:
Identifying mark (Capatect)
Anchor type (Schraubdübel Rondelle Ø8)
Length of anchor (e.g. L295)
Base material group (A, B, C, D, E)





Anchor cap (to lock up the anchor in case of mounting on the surface)

Table A2: Dimensions

Measures in mm

Anchor Typ	Colour	Anchor sleeve				Accompanying Specific screw				Anchor cap		Insulation cover	
		d_{nom}	h_{ef}	min L_a	max L_a	d_s	c	min l_s	max l_s	h_c	d_c	h_R	d_R
Capatect Schraub-dübel Rondelle	orange	8	65	115	295	5,5	60	78	258	23	15	15	66

Determination of maximum thickness of insulation h_D for Capatect Schraubdübel Rondelle:
h_D = L_a - t_{tol} - h_{ef} (L_a = e.g. 115; t_{tol} = 10)
e.g. = h_D = 115 – 10 – 25
$h_{Dmax.}$ = 80

Capatect Schraubdübel Rondelle	**Annex A 5**
Product description Components for mounting on the surface, base material group E – Capatect Schraubdübel Rondelle, Installation tool, Dimensions	

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Table A3: Materials	
Name	Materials
Anchor sleeve	virgin Polyethylene, PE-HD, orange
Plate in combination with the sleeve	Polyamide
Insulation Cover	Polystyrene PS 20
	Mineral wool type HD
Anchor cap	Polystyrene PS 30
Specific screw	Steel, electrogalvanized ≥ 5 µm according to EN ISO 4042:2022, blue passivated
	stainless steel, according to ISO 3506-1:2020 material number 1.4401 or 1.4571 material number 1.4301 or 1.4567

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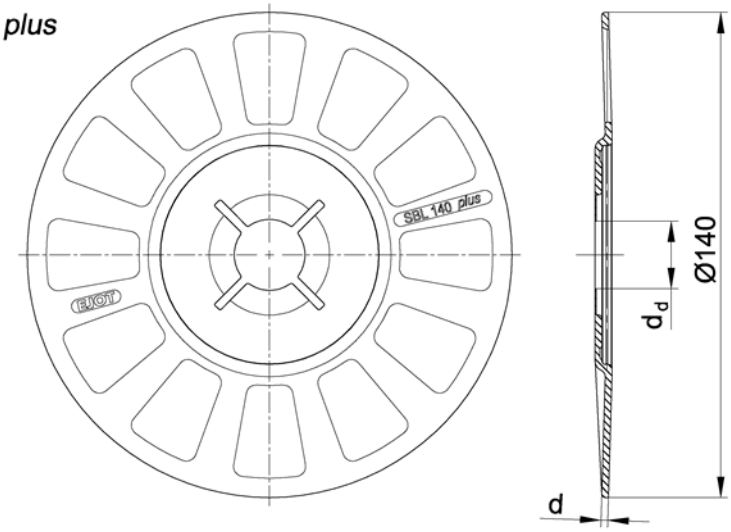
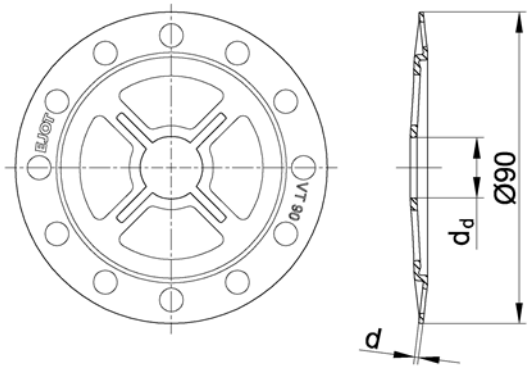
SBL 140 *plus*



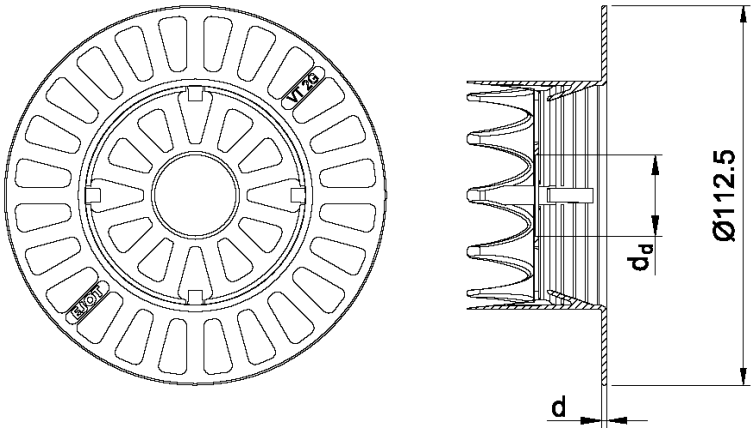
SBL 140 plus	
colour	nature
d_d [mm]	20,0
d [mm]	2,0

VT 90



VT 90	
colour	nature
d_d [mm]	18,5
d [mm]	1,2

VT 2G



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

Capatect Schraubdübel Rondelle

Product description
Plates in combination with Capatect Schraubdübel Rondelle

Annex A 7

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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:

- Compacted normal weight concrete without fibres (base material group A) according to Annex C 1
- Solid masonry (base material group B), according to Annex C 1
- Hollow or perforated masonry (base material group C), according to Annex C 1
- Lightweight aggregate concrete (base material group D), according to Annex C 1
- autoclaved aerated concrete (base material group E), according to Annex C 1
- For other base materials of the base material groups 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 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, 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

Capatect Schraubdübel Rondelle	**Annex B 1**
Intended use Specifications	

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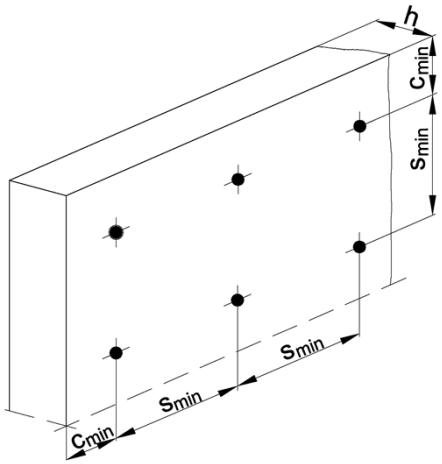
Table B1: Installation parameters

Anchor type		Capatect Schraubdübel Rondelle	
Base material group		A B C D	E
Drill hole diameter	d_0 [mm]	8	8
Cutting diamter of drill bit	d_{cut} [mm] ≤	8,45	8,45
Depth of drilled hole to deepest point			
- deep mounting	h_1 [mm] ≥	50	90
- mounting on the surface	h_2 [mm] ≥	35	75
Effective anchorage depth	h_{ef} [mm] ≥	25	65

Table B2: Anchor distances and dimensions of members

Anchor type		Capatect Schraubdübel Rondelle	
Base material group		A B C D	E
Minimum spacing	s_{min} ≥ [mm]	100	100
Minimum edge distance	c_{min} ≥ [mm]	100	100
Minimum thickness of member			
- deep mounting	h ≥ [mm]	100 40 (only thin skins of concrete)	120
- mounting on the surface	h ≥ [mm]	100 40 (only thin skins of concrete)	120

Scheme of distances and spacing



Capatect Schraubdübel Rondelle

Intended use
Installation parameters,
Edge distances and spacings

Annex B 2

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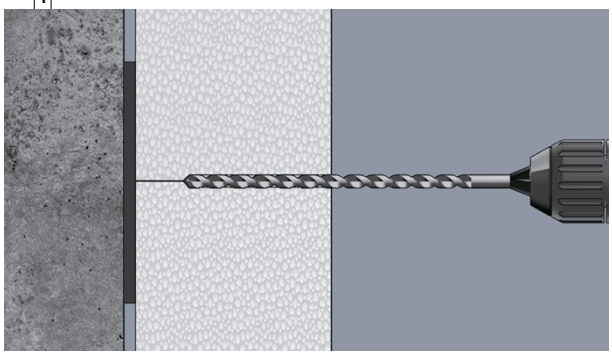
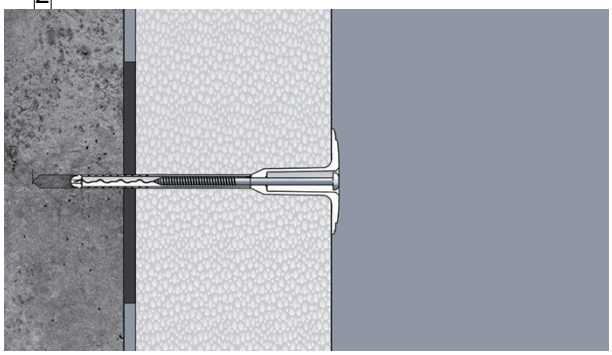
Installation instructions

1



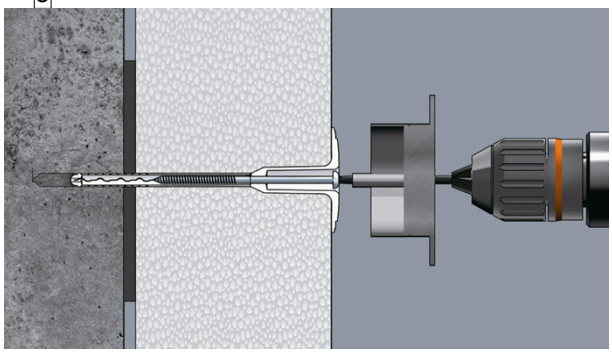
Drill the hole

2



Insert the anchor

3



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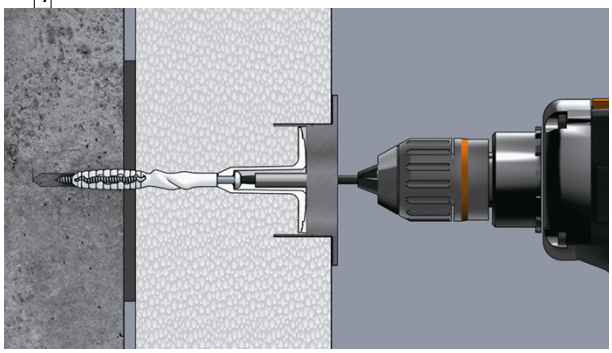
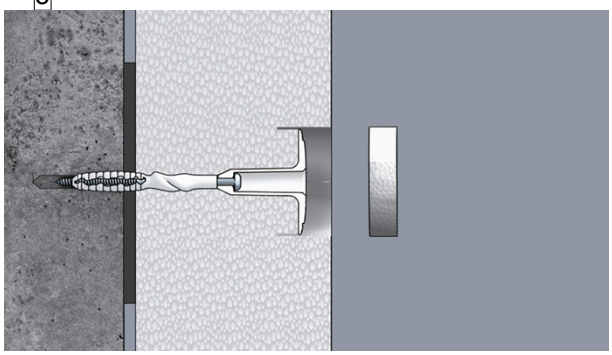


Countersunk installation with CSR-Installation tool

5



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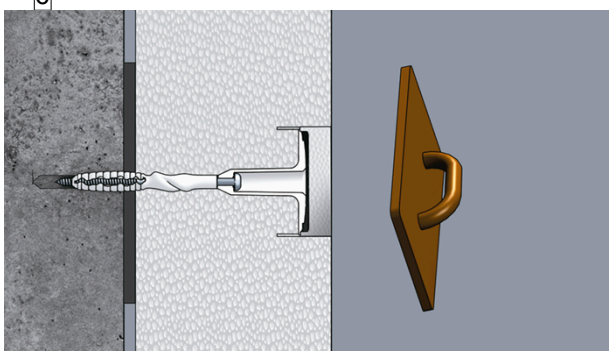

Insert the cap with the help of a float

Capatect Schraubdübel Rondelle	**Annex B 3**
Intended use Countersunk installation with a cap	

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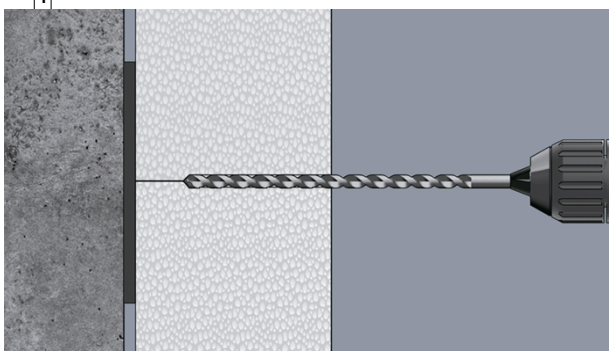
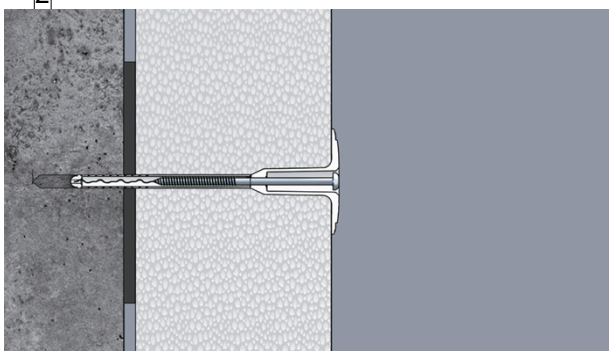
Installation instructions

1



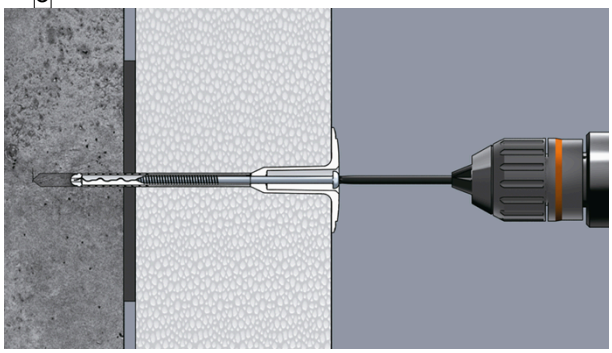
Drill the hole

2



Insert the anchor

3



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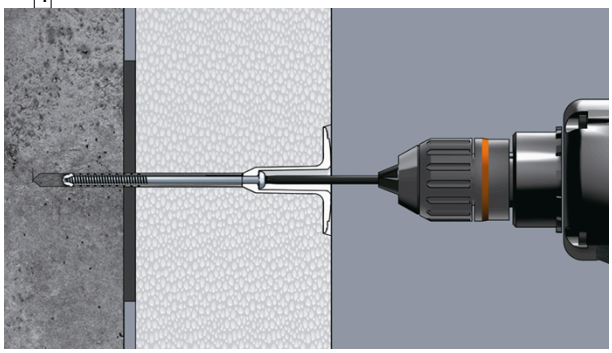
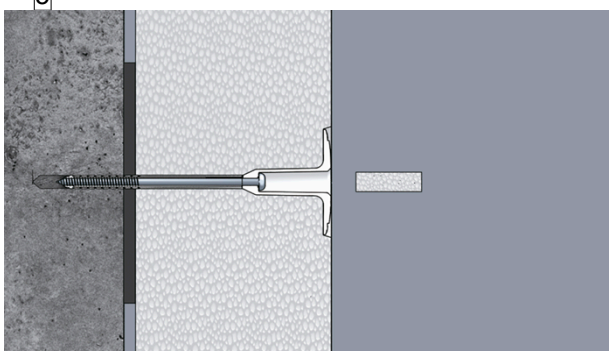


Surface fixed installation with a standard bit

5



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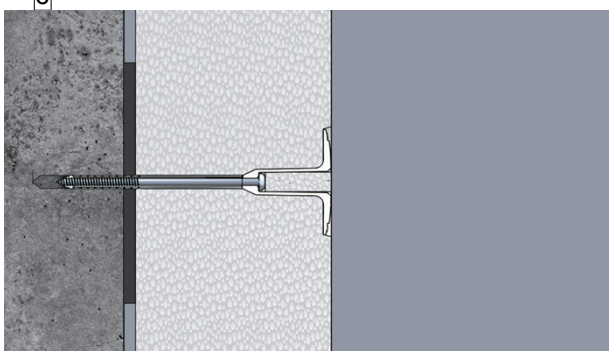

Insert the plug

Capatect Schraubdübel Rondelle	**Annex B 4**
Intended use Surface fixed installation with a plug	

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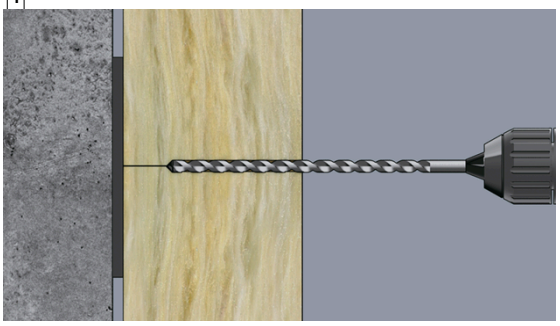
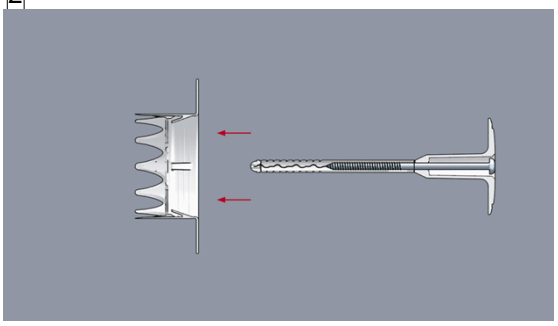
Installation instructions

1



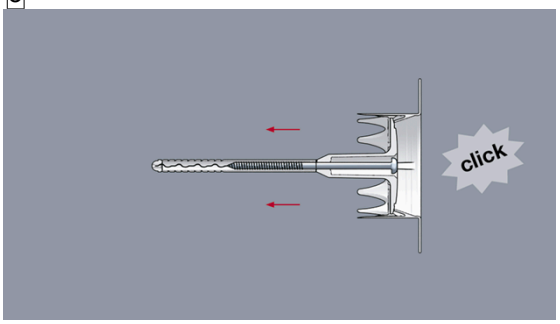
Drill the hole

2



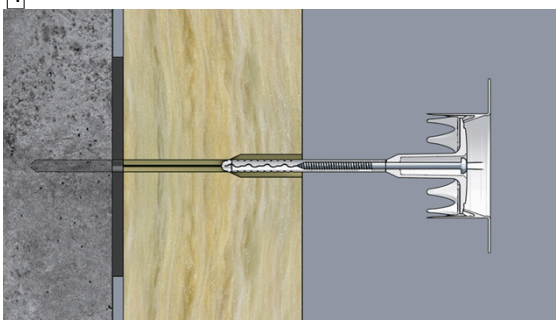
Assemble anchor and plate VT 2G

3



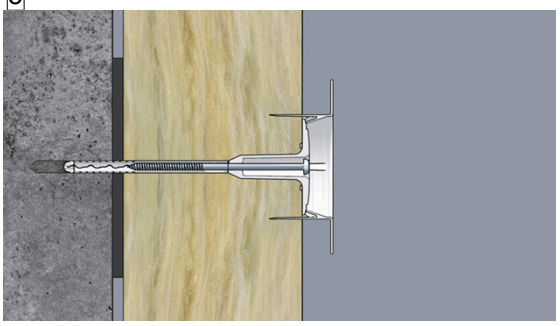
Assemble anchor and plate VT 2G

4



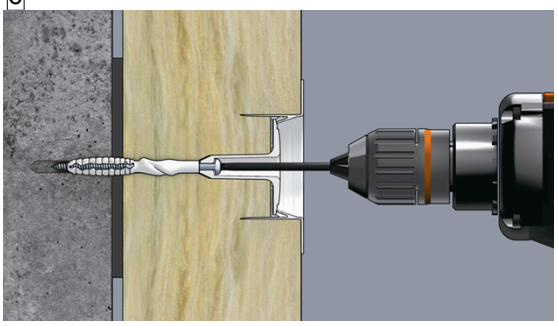
Insert the anchor into the drill hole

5



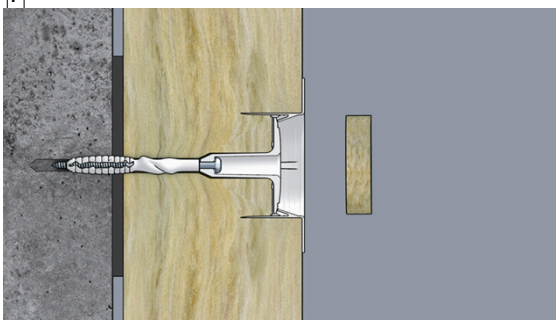
Drive through VT 2G until plate rests on surface

6



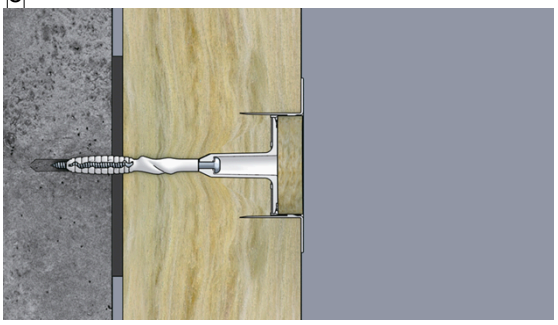
Mounting on the surface with an installation bit

7



Insert the cap

8



Installed anchor

Capatect Schraubdübel Rondelle	**Annex B 5**
Intended use Installation with plate VT 2G and cap	

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

Anchor type Capatect Schraubdübel Rondelle

Base material	Bulk density ρ [kg/dm³]	minimum compressive strength f_b [N/mm²]	General remarks	Drill method	N_{Rk} [kN]
Concrete C12/15 – C50/60 as per EN 206:2013+A1:2016			Compacted normal weight concrete without fibres, thickness of the thin skin 100 mm > h ≥ 40 mm	hammer	1,5
concrete C16/20 – C50/60 as per EN 206:2013+A1:2016 thin concrete members (thin skin)				hammer	1,5
Clay bricks, Mz as per EN 771-1:2011+A1:2015	≥ 1,8	12	Vertically perforation up to 15 %[4)]	hammer	1,5
Sand-lime solid bricks, KS as per EN 771-2:2011+A1:2015	≥ 1,8	12	Vertically perforation up to 15 %[4)]	hammer	1,5
Lightweight concrete solid blocks, V as per EN 771-3:2011+A1:2015	≥ 0,9	4	Perforation of the Resting area up to 10% maximum extension of hole: length = 110mm; wide = 45mm	rotary	0,6
Vertically perforated clay bricks, Hlz as per EN 771-1:2011+A1:2015	≥ 1,2	12	Vertically perforation >15 % and ≤ 50 % [4)]	rotary	1,2[1)]
Sand-lime perforated bricks, KSL as per EN 771-2:2011+A1:2015	≥ 1,6	12	Vertically perforation >15 % and ≤ 50 % [4)]	rotary	1,5[2)]
Lightweight concrete hollow blocks, Hbl, as per EN 771-3:2011+A1:2015	≥ 0,5	2	Vertically perforation >15 % and ≤ 50 % [4)]	rotary	0,6[3)]
Lightweight aggregate concrete LAC, as per EN 1520:2011 / EN 771-3: 2011+A1:2015	≥ 1,8	4	-	hammer	0,9
Autoclaved aerated concrete AAC as per EN 771-4:2011+A1:2015	≥ 0,4	2	-	rotary	0,75
Vertically perforated clay bricks Hlz 250x380x235 mm as per EN 771-1:2011+A1:2015			Outer web thickness ≥ 10,3 mm	rotary	0,75[1)]

[1)] The value applies only for outer web thickness ≥ 11 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.
[4)] Cross section reduced by perforation vertically to the resting area

Capatect Schraubdübel Rondelle

Performances
Characteristic resistance

Annex C 1

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]
Capatect Schraubdübel Rondelle mounted on the surface with EPS anchor cap	60 – 420	0,002
Capatect Schraubdübel Rondelle mounted countersunk with insulation cover	80 – 420	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]
Capatect Schraubdübel Rondelle	60	2,08	0,60

Tabelle C4: Verschiebungen				
Base material	Bulk density ρ [kg/dm³]	minimum compressive strength f_b [N/mm²]	tension load N [kN]	Displacements $\Delta\delta_N$ [mm]
Concrete C12/15 – C 50/60 (EN 206:2013+A1:2016)			0,5	0,7
Concrete C12/15 – C 50/60 (EN 206:2013+A1:2016) Thin concrete members (thin skins e.g.)			0,5	0,7
Clay bricks, Mz (EN 771-1:2011+A1:2015)	≥ 1,8	12	0,5	0,7
Sand-lime solid bricks, KS (EN 771-2:2011+A1:2015)	≥ 1,8	12	0,5	0,7
Lightweight concrete solid blocks, V (EN 771-3:2011+A1:2015)	≥ 0,9	4	0,2	0,7
Vertically perforated clay bricks, HLz (EN 771-2:2011+A1:2015)	≥ 1,2	12	0,4	0,7
Sand-lime perforated bricks, KSL (EN 771-2:2011+A1:2015)	≥ 1,6	12	0,5	0,7
Lightweight concrete hollow blocks, Hbl (EN 771-2:2011+A1:2015)	≥ 0,5	2	0,2	0,7
Lightweight aggregate concrete, LAC (EN 1520:2011 / EN 771-3:2011+A1:2015)	≥ 1,8	4	0,3	0,7
Autoclaved aerated concrete AAC (EN 771-4:2011+A1:2015)	≥ 0,4	2	0,25	0,7
Vertically perforated clay bricks, HLz 250x380x235 (EN 771-2:2011+A1:2015)			0,25	0,7

Capatect Schraubdübel Rondelle

Annex C 2

Performance
Point thermal transmittance, plate stiffness, displacements