Deutsches Institut für Bautechnik

Member of EOTA
www.eota.eu

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-23/0007 of 19 January 2023

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	Baumit screw anchor Speed
Product family to which the construction product belongs	Plastic anchor for fixing of external thermal insulation composite systems with rendering
Manufacturer	Baumit Beteiligungen GmbH Wopfing 156 2754 WALDEGG ÖSTERREICH
Manufacturing plant	manufacturing plant 1, 2
This European Technical Assessment contains	20 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

The European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and shall be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full. However, partial reproduction may only be made with the written consent of the issuing Technical Assessment Body. Any partial reproduction shall be identified as such.

This European Technical Assessment may be withdrawn by the issuing Technical Assessment Body, in particular pursuant to information by the Commission in accordance with Article 25(3) of Regulation (EU) No 305/2011.

Specific Part

1 Technical description of the product

The screwed-in anchor type Baumit screw anchor Speed consists of a plastic sleeve made of polypropylene (virgin material), a plastic shaft with a plate and a cover cap made of polyamide (virgin material) and an accompanying specific screw of galvanised steel. For deep mounting of the anchor in the insulating material the IsoFux Rocket consists in addition of an accompanying insulation cover made of polystyrol or mineral wool. For mounting on the surface the anchor may in addition be combined with the anchor plates T90, T110 and T140. The anchor may also be combined with the anchor plate MW-Cup.

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 - Minimum edge distance and spacing	 See Annex C 1 See Annex B 2
Displacements	See Annex C 2
Plate stiffness	See Annex C 3

3.2 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Point thermal transmittance	See Annex C 3

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

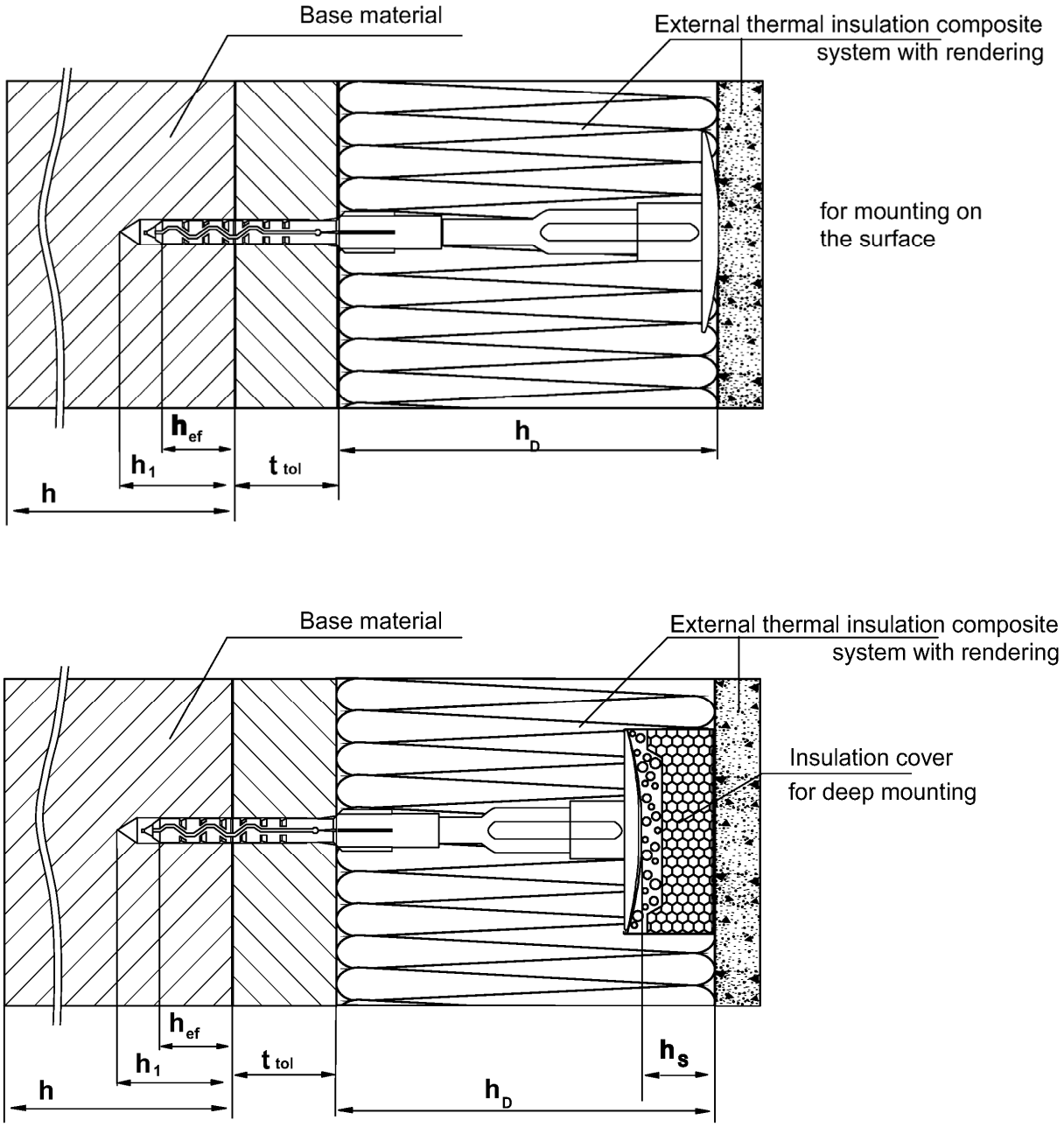
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 19 January 2023 by Deutsches Institut für Bautechnik

Dipl.-Ing. Beatrix Wittstock
Head of Section

beglaubigt:
Ziegler

Deutsches Institut für Bautechnik DIBt



Legend:

h	=	thickness of base material
h_1	=	depth of drilled hole to deepest point
h_{ef}	=	effective anchorage depth
h_D	=	thickness of insulation material
t_{tol}	=	thickness of equalizing layer or non-load bearing coating
h_s	=	Baumit screw anchor Speed depth of countersink

Baumit screw anchor Speed

Product description

installed condition - surface mount, deep mounting: Baumit screw anchor Speed

Annex A 1

Deutsches Institut für Bautechnik DIBt

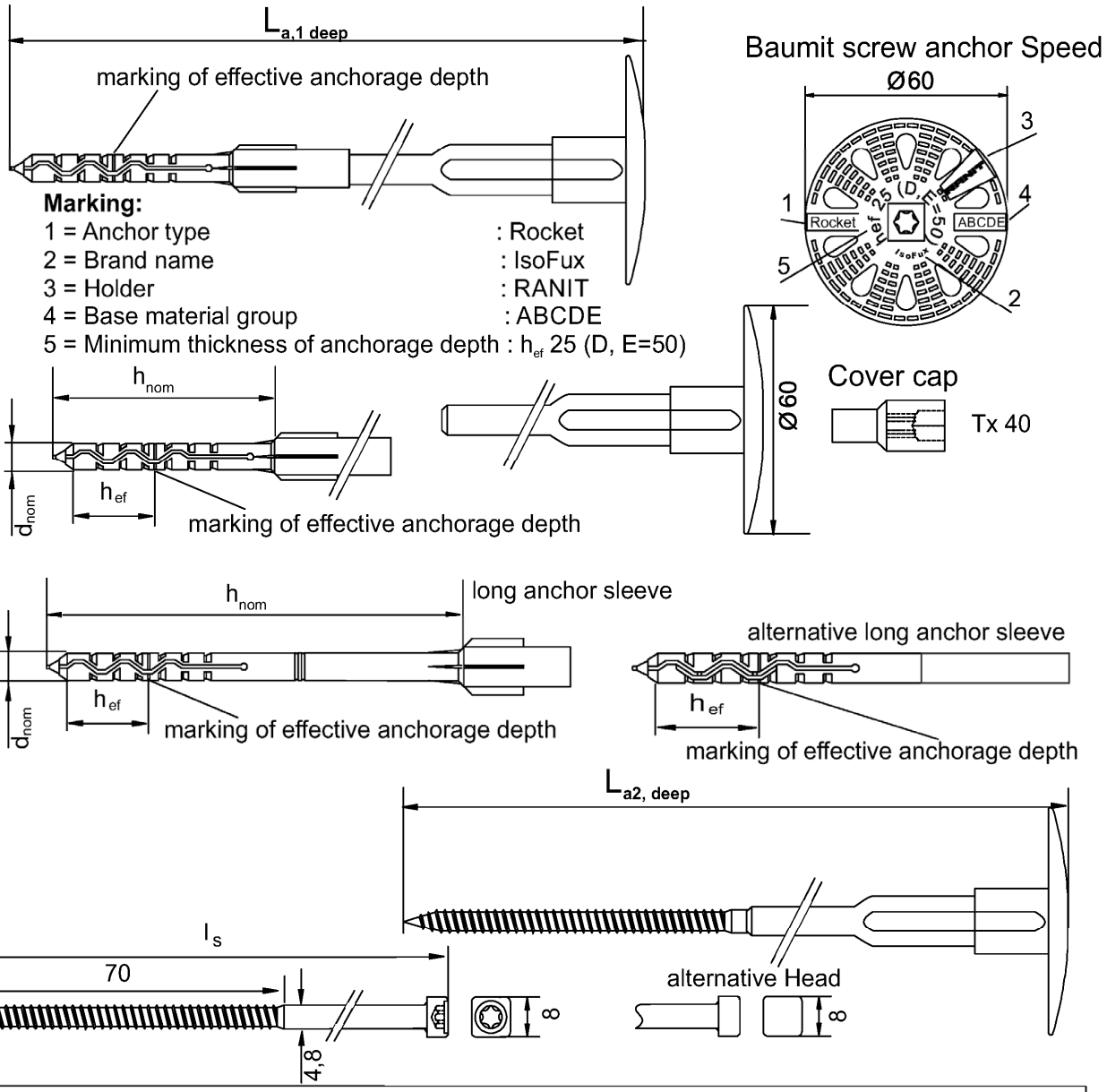


Table A1: Dimensions — **Sizes in mm**

Anchor type	Anchor sleeve				L_{a1}		L_{a2}	
Baumit screw anchor Speed	d_{nom}	h_{ef}	h_{nom}	$t_{tol\ max}$	min $L_{a1,\ deep}$	max L_{a1}	min $L_{a2,\ deep}$	max L_{a2}
short anchor sleeve	**8**	**25**	**65**	**35**	**135**	**480**	**82**	**427**
long anchor sleeve	**8**	**25**	**125**	**95**	**215**	**480**	**162**	**427**

Evaluation of thickness of the insulation $\mathbf{h_{Dmax}}$ Baumit screw anchor Speed with short anchor sleeve
min $L_{a1,\ deep}$ - h_{nom} - 30 = h_{Dmax}; e.g.: 155 -65 -30 = 60 (h_{Dmax})

Evaluation of thickness of the insulation $\mathbf{h_{Dmax}}$ Baumit screw anchor Speed with long anchor sleeve
min $L_{a1,\ deep}$ - h_{nom} + 30 = h_{Dmax}; e.g.: 235 -125 +30 = 140 (h_{Dmax})

Baumit screw anchor Speed

Annex A 2

Product description
Base material group A, B, C - Baumit screw anchor Speed
Components of mounting on the surface, dimensions

Deutsches Institut für Bautechnik DIBt

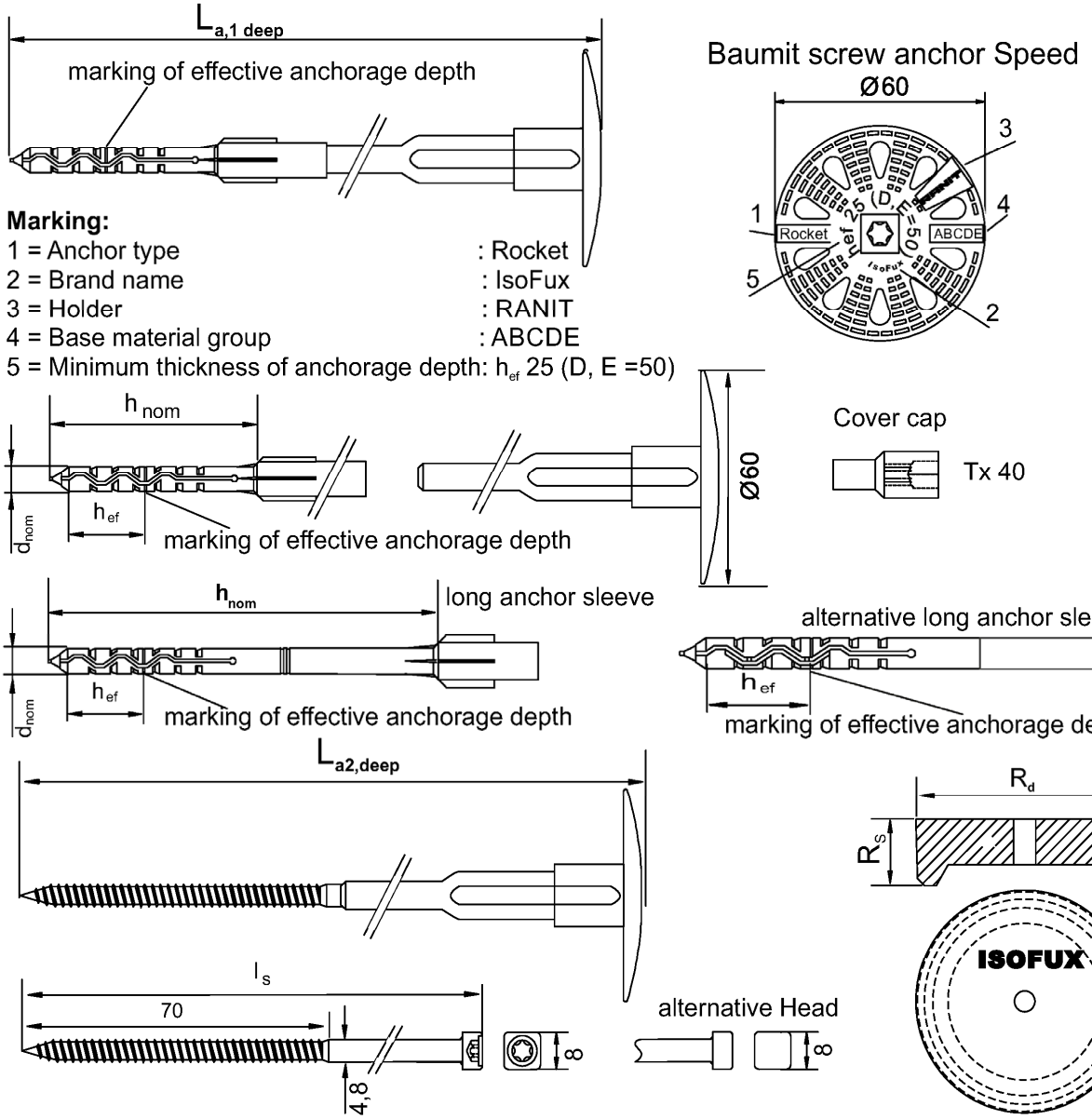


Table A2: Dimensions — **Sizes in mm**

Anchor type	Anchor sleeve				L_{a1}		L_{a2}		cover	
Baumit screw anchor Speed	d_{nom}	h_{ef}	h_{nom}	$t_{tol\ max}$	min $L_{a1,}$ deep	max L_{a1}	min $L_{a2,}$ deep	max L_{a2}	R_s	R_d
short anchor sleeve	**8**	**25**	**65**	**35**	**135**	**480**	**82**	**427**	**20**	**64**
long anchor sleeve	**8**	**25**	**125**	**95**	**215**	**480**	**162**	**427**	**20**	**64**

Evaluation of thickness of the insulation $\mathbf{h_{Dmax}}$ Baumit screw anchor Speed with short anchor sleeve
min $\mathbf{L_{a1,\ deep}}$ - h_{nom} - 30 + Rs = h_{Dmax}; e.g.: 155 -65 -30 +20 = 80 (h_{Dmax})

Evaluation of thickness of the insulation $\mathbf{h_{Dmax}}$ Baumit screw anchor Speed with long anchor sleeve
min $\mathbf{L_{a1,\ deep}}$ - h_{nom} + 30 + Rs = h_{Dmax}; e.g.: 235 -125 +30 +20 = 160 (h_{Dmax})

Baumit screw anchor Speed

Product description
Base material group A, B, C - Baumit screw anchor Speed
Components for deep mounting, dimensions

Annex A 3

Deutsches Institut für Bautechnik DIBt

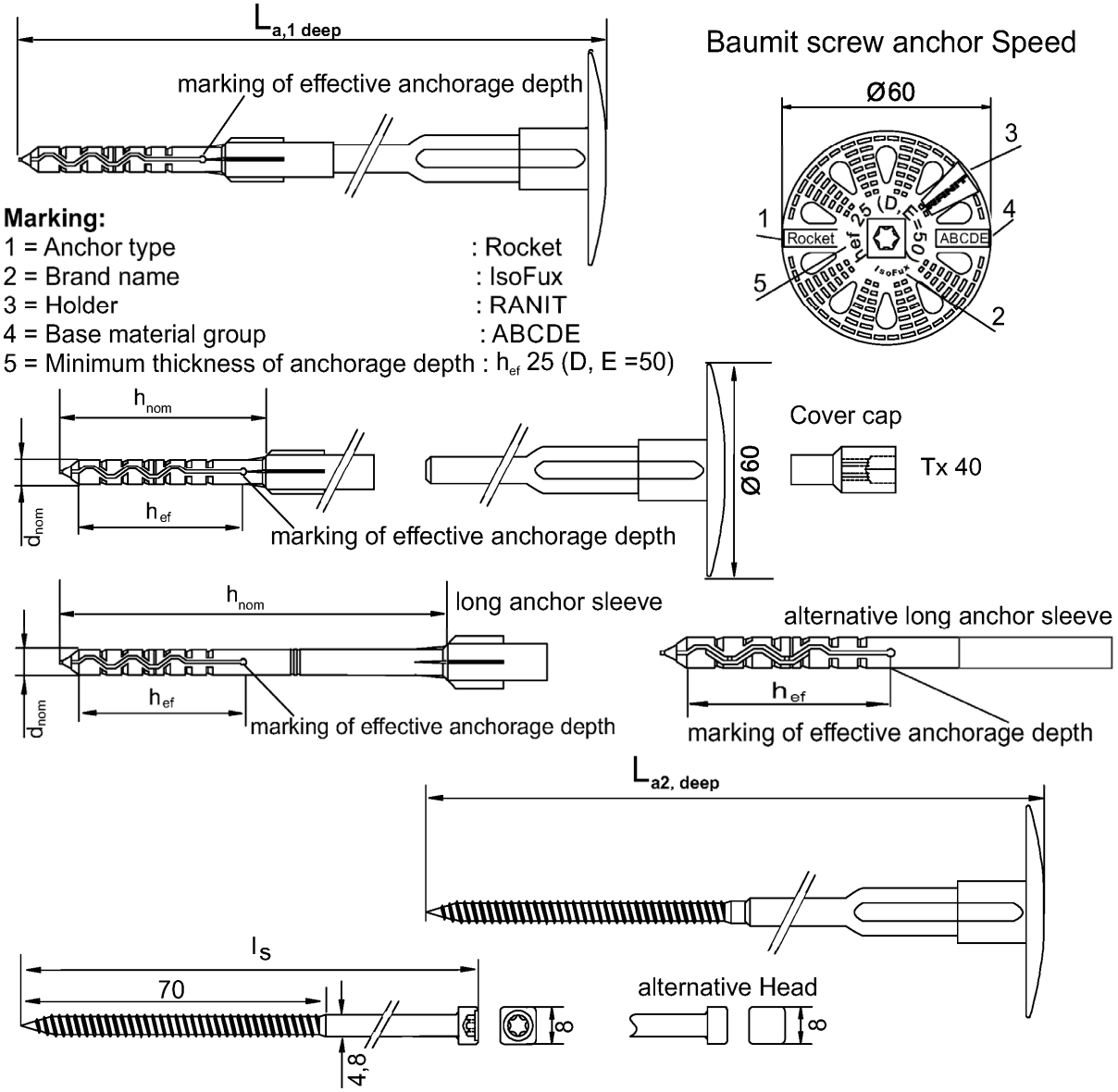


Table A3: Dimensions								**Sizes in mm**
Anchor type	Anchor sleeve				L_{a1}		L_{a2}	
Baumit screw anchor Speed	d_{nom}	h_{ef}	h_{nom}	$t_{tol\ max}$	min $L_{a1,}$ deep	max L_{a1}	min $L_{a2,}$ deep	max L_{a2}
short anchor sleeve	**8**	**50**	**65**	**10**	**135**	**480**	**82**	**427**
long anchor sleeve	**8**	**50**	**125**	**70**	**215**	**480**	**162**	**427**

Evaluation of thickness of the insulation $\mathbf{h_{Dmax}}$ Baumit screw anchor Speed with short anchor sleeve
min $L_{a1,\ deep}$ - h_{nom} - 30 = h_{Dmax}; e.g.: 155 -65 -30 = 60 (h_{Dmax})

Evaluation of thickness of the insulation $\mathbf{h_{Dmax}}$ Baumit screw anchor Speed with long anchor sleeve
min $L_{a1,\ deep}$ - h_{nom} + 30 = h_{Dmax}; e.g.: 235 -125 +30 = 140 (h_{Dmax})

Baumit screw anchor Speed

Product description
Base material group D, E - Baumit screw anchor Speed
Components of mounting on the surface, dimensions

Annex A 4

Deutsches Institut für Bautechnik DIBt

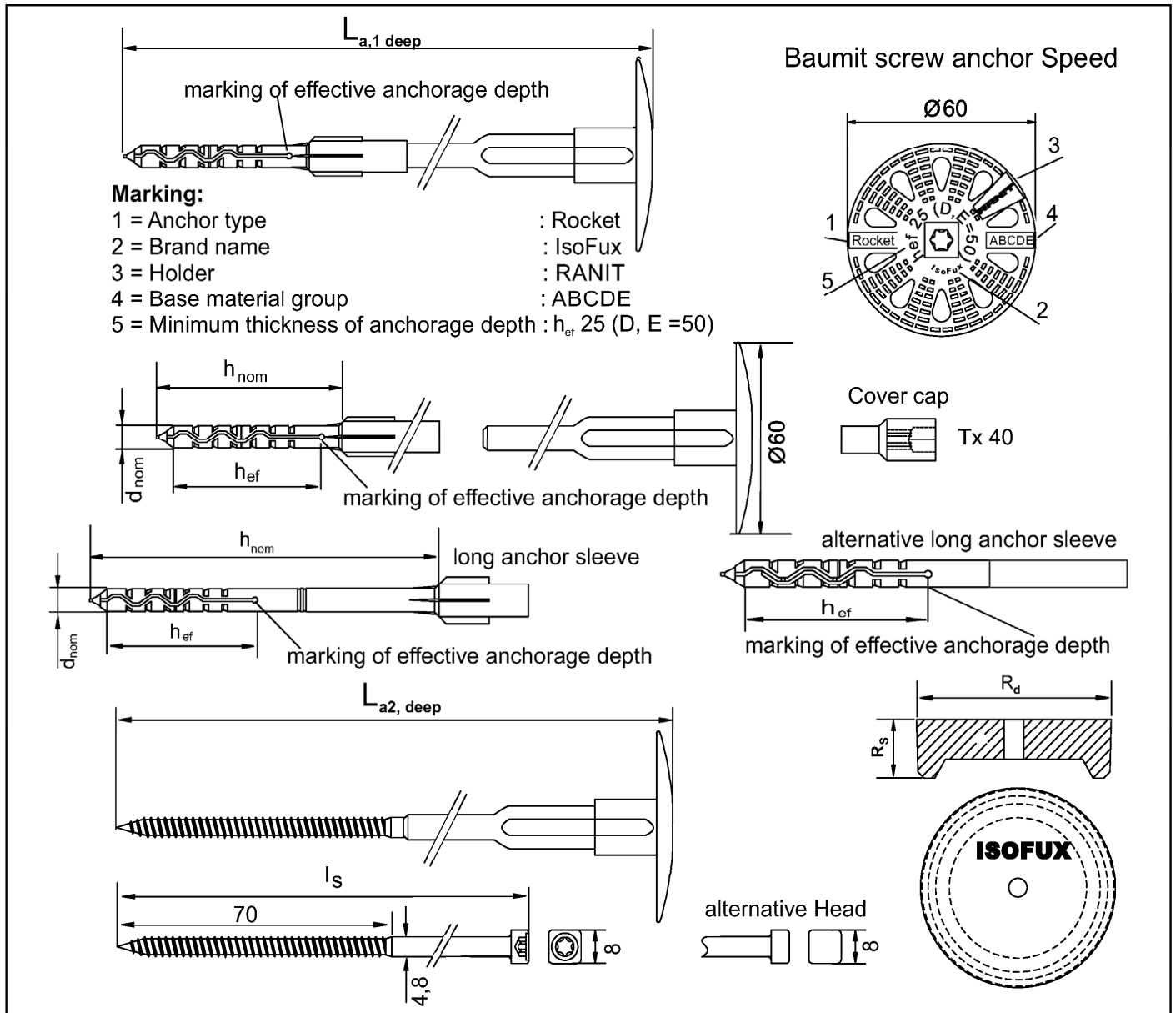


Table A4: Dimensions **Sizes in mm**

Anchor type	Anchor sleeve				L_{a1}		L_{a2}		cover	
Baumit screw anchor Speed	d_{nom}	h_{ef}	h_{nom}	$t_{tol\ max}$	min L_{a1}, deep	max L_{a1}	min L_{a2}, deep	max L_{a2}	R_s	R_d
short anchor sleeve	**8**	**50**	**65**	**10**	**135**	**480**	**82**	**427**	**20**	**64**
long anchor sleeve	**8**	**50**	**125**	**70**	**215**	**480**	**162**	**427**	**20**	**64**

Evaluation of thickness of the insulation $\mathbf{h_{Dmax}}$ Baumit screw anchor Speed with short anchor sleeve
min $L_{a1,\ deep}$ - h_{nom} - 30 + Rs = h_{Dmax}; e.g.: 155 -65 -30 +20 = 80 (h_{Dmax})

Evaluation of thickness of the insulation $\mathbf{h_{Dmax}}$ Baumit screw anchor Speed with long anchor sleeve
min $L_{a1,\ deep}$ - h_{nom} + 30 + Rs = h_{Dmax}; e.g.: 235 -125 +30 +20 = 160 (h_{Dmax})

Baumit screw anchor Speed

Annex A 5

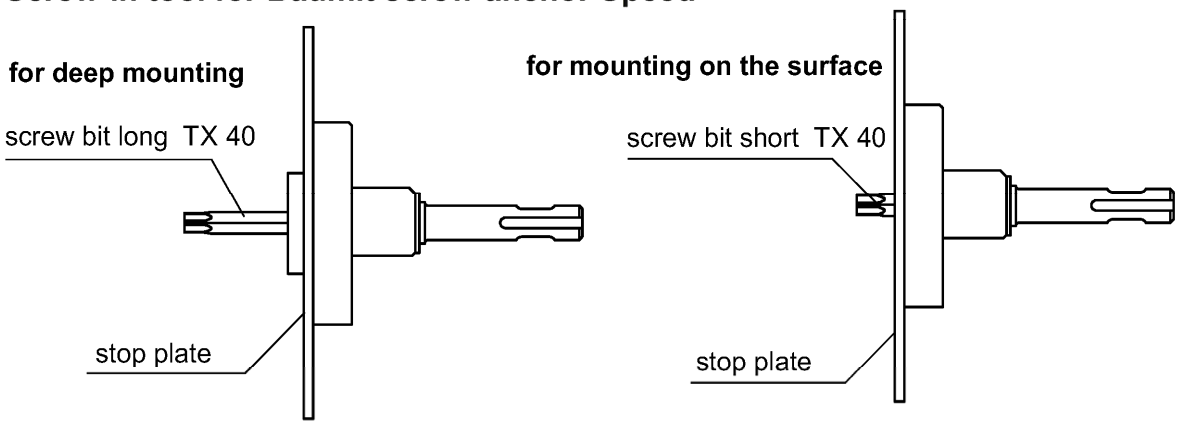
Product description
Base material group D, E - Baumit screw anchor Speed
Components for deep mounting, dimensions

Deutsches Institut für Bautechnik DIBt

Table A5: Maximum insulation thickness for mounting on the surface and deep mounting, classification of the lengths L_{a1} ,color coding of the cover caps

mounting on the surface h_D max	deep mounting h_D max	min L_{a1}, deep	max L_{a1}	Cover cap Color
40	60	135	160	light beige
60	80	155	180	beige
80	100	175	200	yellow
100	120	195	220	green
120	140	215	240	white
140	160	235	260	orange
160	180	255	280	brown
180	200	275	300	blue
200	220	295	320	red
220	240	315	340	light grey
240	260	335	360	black
260	280	355	380	violet
280	300	375	400	dark grey
320	340	415	440	dark green
360	380	455	480	natural

Screw-in tool for Baumit screw anchor Speed

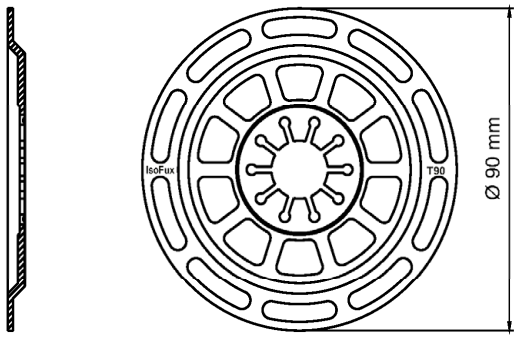


Baumit screw anchor Speed

Product description
Classification of the anchor length L_{a1} for the insulation thickness h_D and colour coding of the cover caps, Screw- in tool for Baumit screw anchor Speed

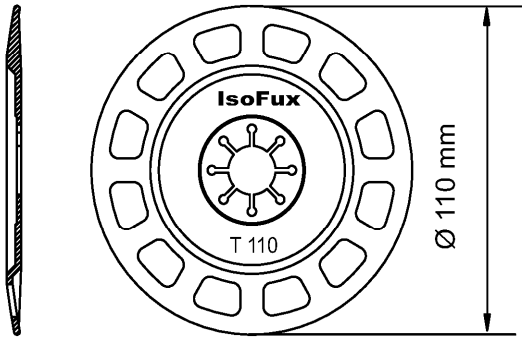
Annex A 6

Deutsches Institut für Bautechnik DIBt

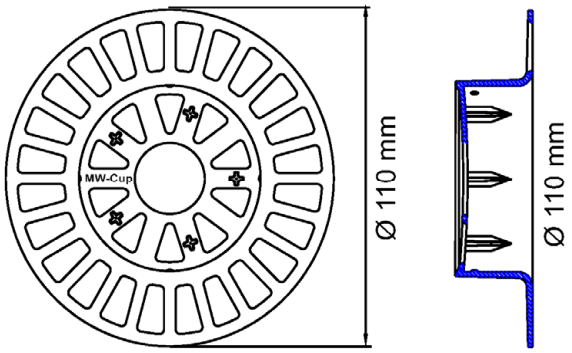


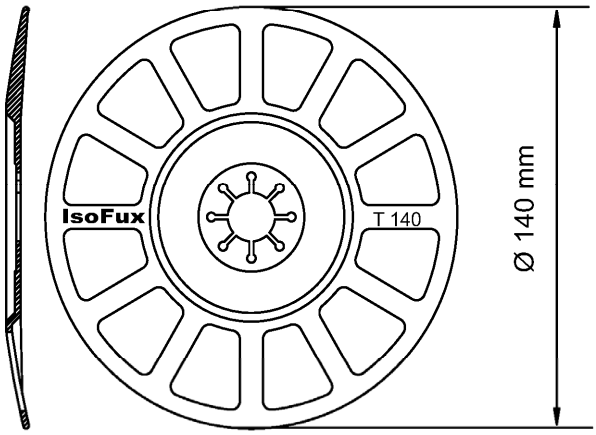
Material:
virgin Polypropylene (PP)
Color: grey, orange, red

Material:
virgin Polyamide 6.6 (PA)
Color: grey, orange, red



Material:
virgin Polyamid 6.0 GF (PA GF)
Color: natural- beige





Material:
virgin Polyamide 6.6 (PA)
Color: grey, orange, red

Baumit screw anchor Speed

Product description
Plates T90, T110 and T140 and MW-CUP in combination with Baumit screw anchor Speed

Annex A 7

Deutsches Institut für Bautechnik DIBt

Table A6 : Materials

Designation	**Material**
Anchor sleeve Color: grey	virgin Polypropylene (PP)
Shaft with plate Color: grey or red	virgin Polyamid (PA)
MW-CUP Cover cap	virgin Polyamid 6.0 GF virgin Polyamid 6.0 GF
Additional plate T110, T140 Additional plate T 90 Color: grey, orange or red	virgin Polyamid 6.6 virgin Polypropylene (PP)
Special screw	Steel, electro galvanized 5 µm
Insulation cover	Polystyrol PS20 Mineral wool Type HD

Baumit screw anchor Speed	**Annex A 8**
Product description Materials	

Deutsches Institut für Bautechnik DIBt

Specifications of intended use

Anchorages subject to:

. The anchor shall only be used for the transmission of wind suction loads and shall not be used for the transmission of dead loads of thermal insulation composite system.

Base materials:

. Compacted normal weight concrete without fibres (base material group A) according Annex C 1
. Solid masonry (base material group B) according Annex C 1
. Lightweight aggregate concrete (base material group D) according to Annex C 1
. Hollow or perforated masonry (base material group C) 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 group 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.

Application temperature range:

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

Design:

. The anchors 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 shall be prepared taking account of the loads to be anchored. The position of the anchor shall be indicated on the design drawings.

. Fasteners are only to be used for multiple fixing of thermal insulation composite system.

Installation:

. Drilling method shall comply to Annex C 1
. Anchor installation carried out by appropiately qualified personnel and under the supervision of the person responsible for technical matters on the site.
. Ambient temperature during the installation of the anchor 0°C to +40°C
. Exposure to UV due to solar radiation of the anchor not protected by rendering < 6 weeks.

Baumit screw anchor Speed	**Annex B 1**
Intended use Specification	

Deutsches Institut für Bautechnik DIBt

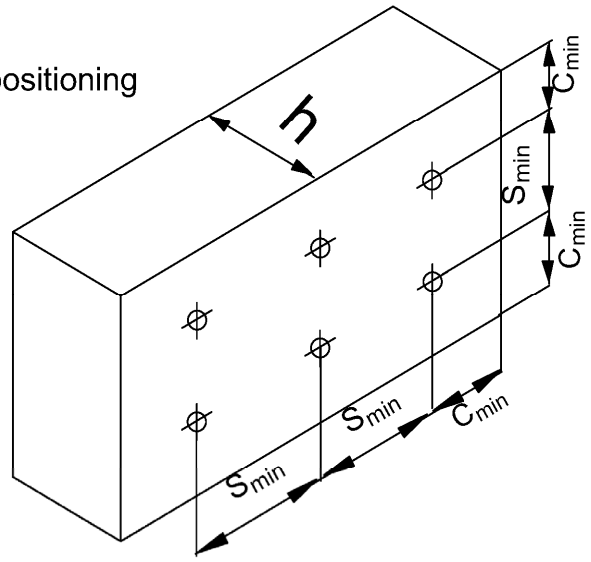
Table B1: Installation parameters

Anchor type		Baumit screw anchor Speed
Drill hole diameter	d_0 (mm) =	8
Cutting diameter of drill bit	d_{cut} (mm) ≤	8,45
Depth of drill hole to deepest point Base material group : A B C	h_1 (mm) ≥	35
Base material group : D E	h_1 (mm) ≥	60
Effective anchorage depth Base material group : A B C	h_{ef} (mm) ≥	25
Base material group : D E	h_{ef} (mm) ≥	50

Table B2: Anchor distances and dimensions of members

Anchor type		Baumit screw anchor Speed
Minimum spacing	s_{min} = [mm]	100
Minimum edge distance	c_{min} = [mm]	100
Minimum thickness of concrete member	h = [mm]	100

Scheme of anchor positioning

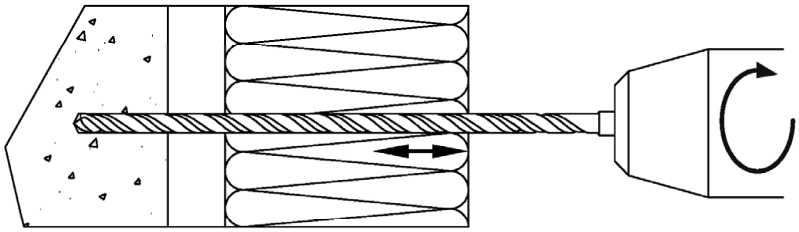


Baumit screw anchor Speed

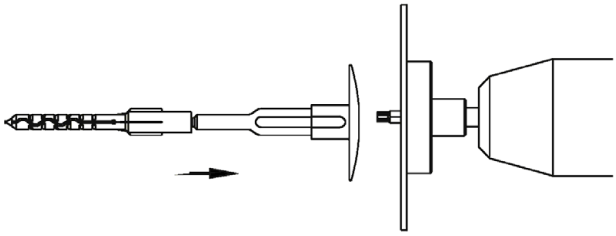
Intended use
Installation parameters, minimum thickness, edge distance and spacing

Annex B 2

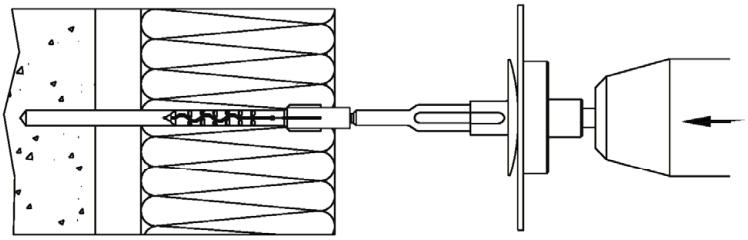
Deutsches Institut für Bautechnik DIBt



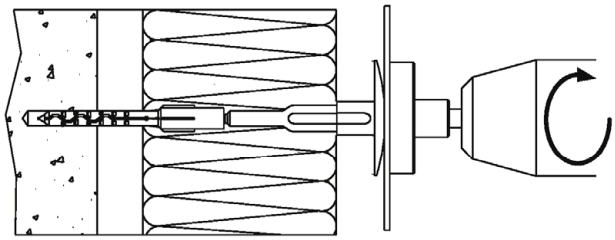
1) Drill the hole perpendicular to the substrate surface. Clean the drill hole.



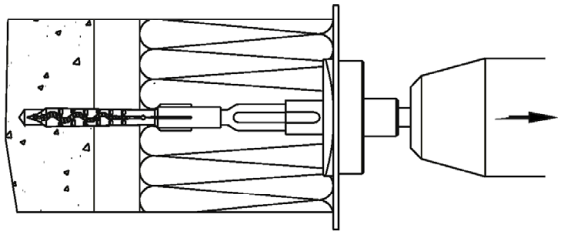
2) Put the anchor on the mounting tool.



3) Place the anchor into the drill hole.



4) Anchor with the screw drill mounting. The bottom side of the plate must be flush with the ETICS.



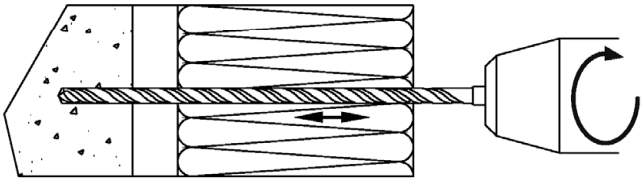
5) Installed condition. remove the mounting tool.

Baumit screw anchor Speed

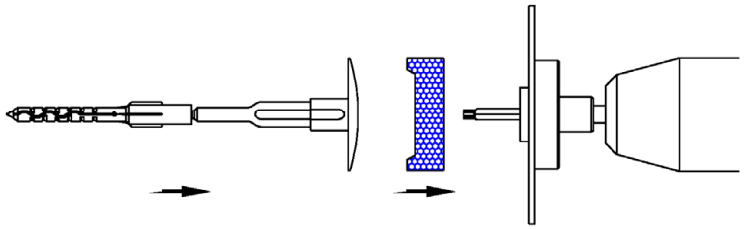
Intended use
Installation instructions Baumit screw anchor Speed surface mount

Annex B 3

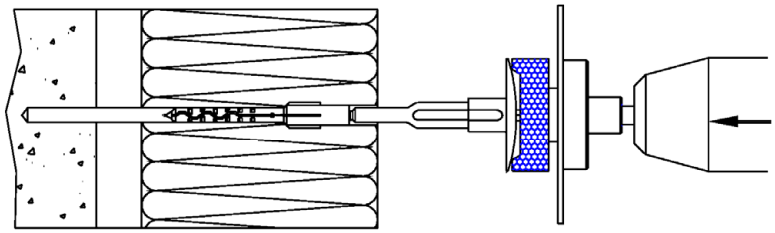
Deutsches Institut für Bautechnik DIBt



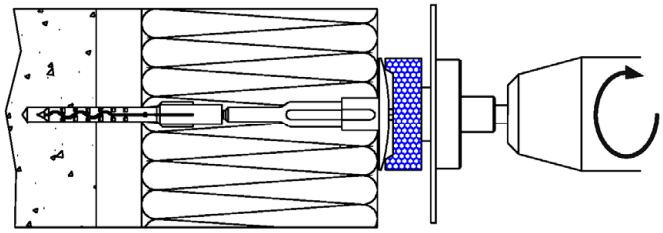
1) Drill the hole perpendicular to the substrate surface. Clean the drill hole.



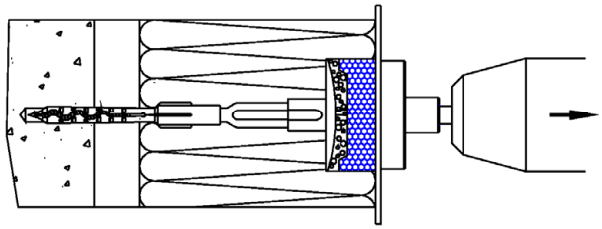
2) Put the anchor and the insulation cover on the mounting tool.



3) Place the anchor into the drill hole.



4) Anchor with the screw drill mounting. The bottom side of the plate must be flush with the ETICS.



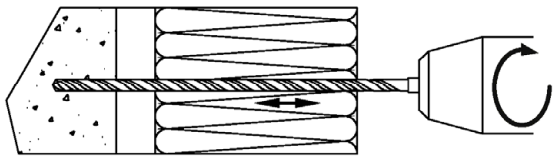
5) Installed condition. remove the mounting tool.

Baumit screw anchor Speed

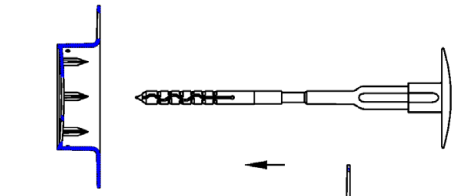
Intended use
Installation instructions Baumit screw anchor Speed immerged mount

Annex B 4

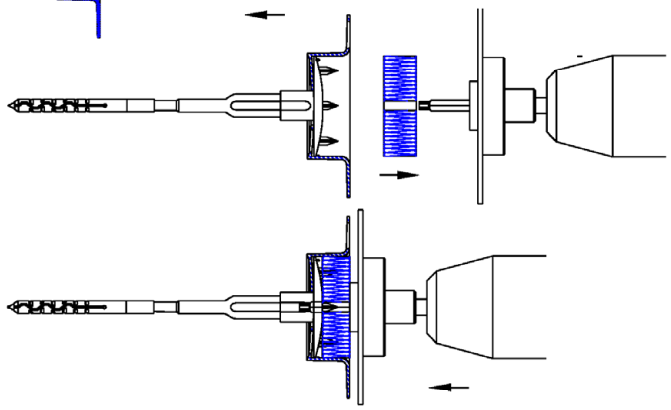
Deutsches Institut für Bautechnik DIBt



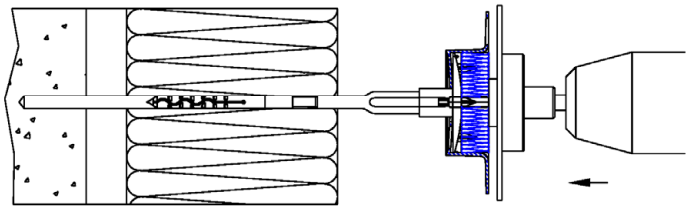
1) Drill the hole perpendicular to the substrate surface. Clean the drill hole.



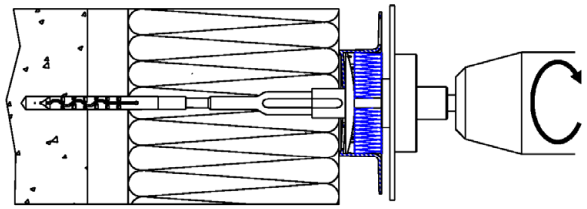
2) Put the anchor Baumit screw anchor Speed in the MW-CUP



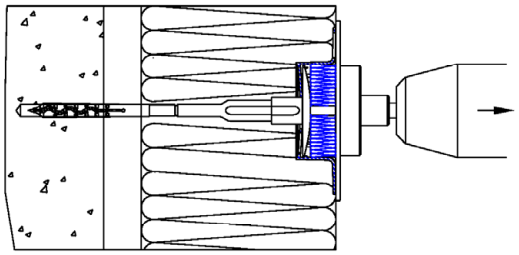
3) Put the anchor Baumit screw anchor Speed and the MW-CUP and the insulation cover on the mounting tool.



4) Place the anchor into the drill hole.



5) Anchor with the screw drill mounting. The bottom side of the plate must be flush with the ETICS.



6) Installed condition. remove the mounting tool.

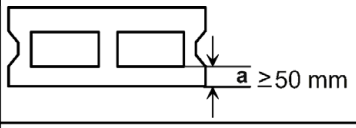
Baumit screw anchor Speed

Intended use
Installation instructions Baumit screw anchor Speed in combination with MW-CUP

Annex B 5

Deutsches Institut für Bautechnik DIBt

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

Anchor type	Baumit screw anchor Speed				
Base material	Bulk density ρ [kg/dm³]	Minimum compressive strength f_b [N/mm²]	Remarks	Drill method	N_{Rk} [kN]
Concrete C12/15 - C20/25 EN 206: 2013+A1:2016			Compacted normal weight concrete without fibres	Hammer	**1,5**
Concrete C50/60 EN 206: 2013+A1:2016			Compacted normal weight concrete without fibres	Hammer	**1,5**
Clay bricks Mz EN 771-1:2011+A1:2015	≥ 1,8	20	Cross-section reduced by vertical perforation up to 15%	Hammer	**1,5**
Sand-lime solid bricks KS EN 771-2:2011+A1:2015	≥ 1,8	12	Cross-section reduced by vertical perforation up to 15%	Hammer	**1,5**
Sand-lime perforated bricks KSL EN 771-2:2011+A1:2015	≥ 1,4	12	Cross-section reduced by vertical perforation more than 15%	Rotary drilling	**1,2** 1)
Vertically perforated clay bricks HLZ EN 771-1:2011+A1:2015	≥ 1,0	12	Cross-section reduced by vertical perforation for more than 15% and less than 50%	Rotary drilling	**0,75** 2)
Lightweight concrete solid bricks EN 771-3:2011+A1:2015	≥ 1,2	6	Proportion of hole up to 10% maximum extension of hole: length= 110mm; wide= 45 mm	Rotary drilling	**0,4**
Lightweight concrete hollow blocks Hbl EN 771-3:2011+A1:2015	≥ 1,2	6		Rotary drilling	**0,6**
Autoclaved aerated concrete EN 771-4:2011+A1:2015	≥ 0,65	4	PP/PPE	Rotary drilling	**1,2**
Lightweight aggregate concrete LAC 6 EN 1520:2011 /EN 771-3:2011 +A1:2015	≥ 0,90	6		Hammer	**0,9**

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

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

Baumit screw anchor Speed	**Annex C 1**
Performance Characteristic resistance	

Deutsches Institut für Bautechnik DIBt

Table C2: Displacements

Base material	Bulk density [kg/dm³]	Minimum compressive strength [N/mm²]	Tension load N [kN]	Displacements $\Delta\delta_N$ [mm]
Concrete C12/15 - C50/60 EN 206:2013+A1:2016	≥ 1,8	20	0,50	0,3
Clay brick, Mz EN 771-1:2011+A1:2015	≥ 1,8	20	0,50	0,3
Sand-lime solid brick, KS EN 771-2:2011+A1:2015	≥ 1,8	12	0,50	0,3
Vertically perforated sand-lime brick , KSL EN 771-2:2011+A1:2015	≥ 1,4	12	0,40	0,3
Vertically perforated clay brick, HLZ EN 771-1:2011+A1:2015	≥ 1,0	12	0,25	0,3
Lightweight concrete solid bricks, V EN 771-3:2011+A1:2015	≥ 1,2	6	0,15	0,3
Lightweight concrete hollow blocks, Hbl EN 771-3:2011+A1:2015	≥ 1,2	6	0,20	0,3
Autoclaved aerated concrete, AAC EN 771-4:2011+A1:2015	≥ 0,65	4	0,40	0,3
Lightweight aggregate concrete LAC 6 EN 1520 :2011 / EN 771-3:2011 +A1:2015	≥ 0,90	6	0,30	0,4

Baumit screw anchor Speed

Performance
Displacements

Annex C 2

Deutsches Institut für Bautechnik DIBt

Table C3: Plate stiffness according EOTA Technical Report TR 026: May 2016

Anchor type	Diameter of the anchor plate [mm]	Load resistance of the anchor plate [kN]	Plate stiffness [kN/mm]
Baumit screw anchor Speed	60	2,5	1,1

Table C4: Point thermal transmittance according EOTA Technical Report TR 025: May 2016

Anchor type	Insulation thickness h_D [mm]	point thermal transmittance χ [W/K]
Baumit screw anchor Speed deep mounted	80 - 380	0,001
Baumit screw anchor Speed flush mounted	60 - 360	0,002

Baumit screw anchor Speed	**Annex C 3**
Performance Plate stiffness and point thermal transmittance	