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European Technical Assessment Body
for construction products



European Technical Assessment

ETA-12/0270
of 30 October 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

Rogger RSD-System Anchor

Product family to which the construction product belongs

Plastic anchor for redundant non-structural systems in concrete and masonry

Manufacturer

Rogger Fasteners AG
Befestigungen und Werkzeuge
Gärbi 1
3257 GROSSAFFOLTERN
SCHWEIZ

Manufacturing plant

Rogger, Herstellwerk 1
Rogger, Herstellwerk 2

This European Technical Assessment contains

17 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 330284-00-0604, edition 12/2020

This version replaces

ETA-12/0270 issued on 31 August 2017

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Specific Part

1 Technical description of the product

The Rogger RSD 10 system anchor is a plastic anchor consisting of a plastic sleeve made of polyamide and an accompanying specific screw of zinc coated carbon steel, covered with a polymeric coating from the head to the shank.

The plastic sleeve is expanded by screwing in the specific screw which presses the sleeve against the wall of the drilled hole.

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 anchors of at least 50 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 in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1
Resistance to fire	See Annex C 1

3.2 Mechanical resistance and stability (BWR 4)

Essential characteristic	Performance
Resistance to steel failure under tension loading	See Annex C 1
Resistance to steel failure under shear loading	See Annex C 1
Resistance to pull-out or concrete failure under tension loading (base material group a)	See Annex C 1
Resistance in any load direction without lever arm (base material group b, c, d)	See Annex C 2
Edge distance and spacing (base material group a)	See Annex B 4
Edge distance and spacing (base material group b, c, d)	See Annex B 6
Displacements under short-term and long-term loading	See Annex C 1
Durability	See Annex B 1

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with European Assessment Document EAD 330284-00-0604 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

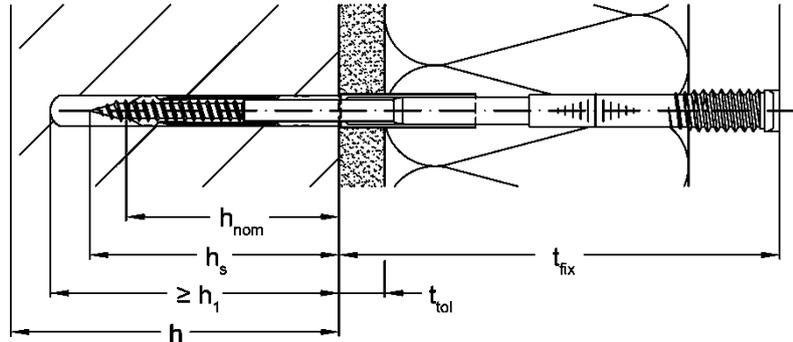
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 30 October 2025 by Deutsches Institut für Bautechnik

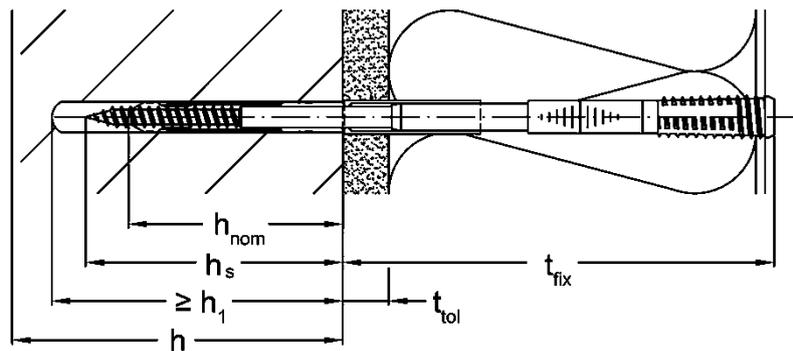
Dipl.-Ing. Beatrix Wittstock
Head of Section

beglaubigt:
Ziegler

Plastic Anchor RSD 10



intended use screw with polymeric thread



intended use screw with stainless steel thread

l_{TH}	length of thread at the head
l_T	length of thread
l_s	length of screw
d_s	diameter of the shank
d_T	diameter of the screw
h_{nom}	overall plastic anchor embedment depth in the base material
d_{nom}	diameter of the plastic sleeve
d_{sh}	diameter of the shaft
l_{sh}	length of shaft
l_d	length of the plastic sleeve
h_1	depth of drill hole to deepest point
h	thickness of member
h_s	screwing depth in the base material
t_{fix}	thickness of fixture
t_{tol}	thickness of non-load-bearing layer

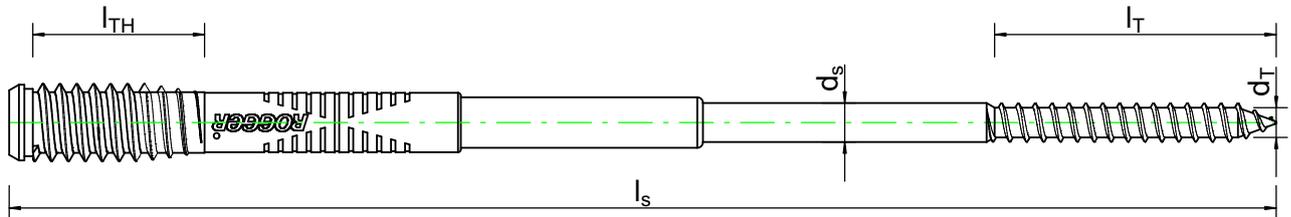
Rogger RSD-System Anchor

Product description
Installed condition

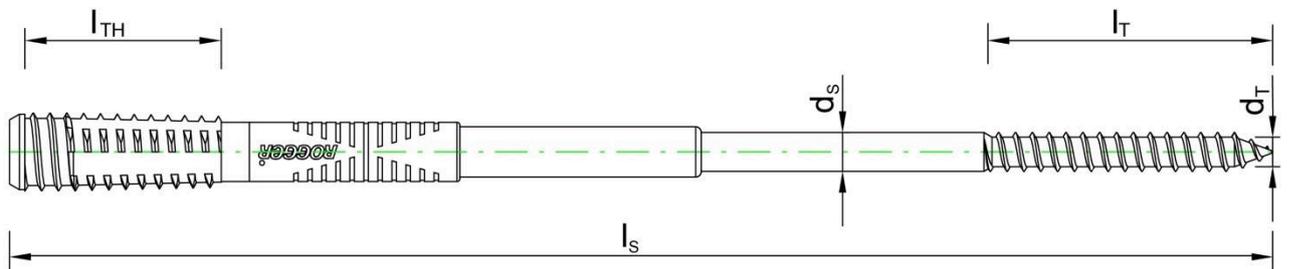
Annex A 1

Plastic Anchor RSD 10

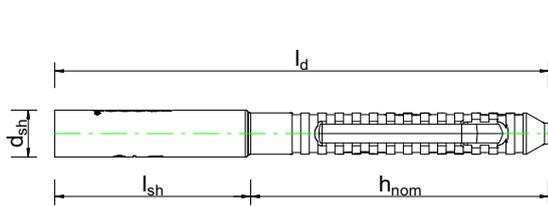
Anchor parts



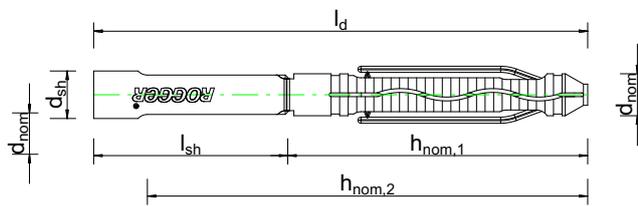
Screw with polymeric thread



Screw with stainless steel thread

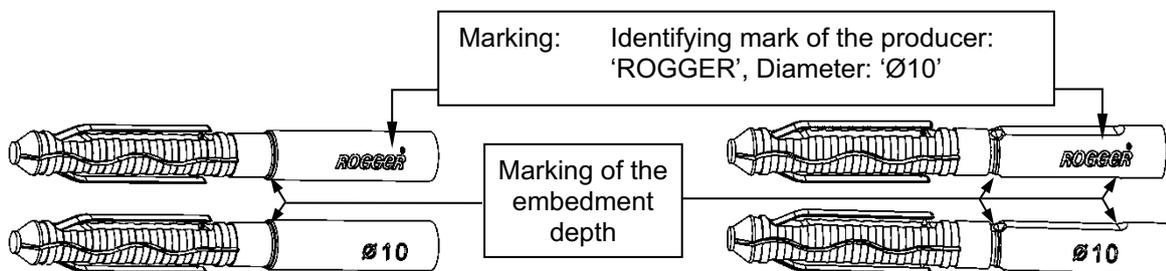


Sleeve for a nominal embedment
 $h_{nom} = 70$ mm
standard version



Sleeve for a nominal embedment
 $h_{nom} = 70$ mm and $h_{nom} = 110$ mm
oblate version

Product marking



Standard sleeve for a nominal embedment $h_{nom} = 70$ mm

Oblate sleeve for a nominal embedment $h_{nom} = 70$ mm and $h_{nom} = 110$ mm

Rogger RSD-System Anchor

Product description
Special screw, anchor sleeve - marking

Annex A 2

Table A3.1 Anchor dimensions

Anchor		RSD 10 normal	RSD 10 oblate version	
Overall plastic anchor embedment depth ¹⁾	$h_{nom} =$ [mm]	70	70	110
Plastic sleeve				
Plastic sleeve diameter	$d_{nom} =$ [mm]	10	10	
Length of plastic sleeve	$l_d =$ [mm]	115,5		
Length of shaft	$l_{sh} =$ [mm]	45,5	45,5	
Diameter of shaft	$d_{sh} \geq$ [mm]	11,2	11,2 (9,3 for the oblate part)	
Special screw				
Screw diameter	$d_T =$ [mm]	5,3		
Shank diameter	$d_S =$ [mm]	7,0		
Length of screw	$l_s \geq$ [mm]	175		
Length of thread	$l_T =$ [mm]	50		
Length of thread at the head (polymeric)	$l_{TH} =$ [mm]	30,5		
Length of thread at the head (stainless steel)	$l_{TH} =$ [mm]	35		

¹⁾ See Annex A 1

Table A3.2 Materials

Designation	Material
Plastic sleeve	Polyamide, colour black
Special screw	Carbon steel, strength class 10.9 ($f_{uk} \geq 1000 \text{ N/mm}^2$; $f_{yk} \geq 900 \text{ N/mm}^2$), according to EN ISO 4042:2022, polymeric coated (polyamide) polymeric thread: galvanised, polymeric coated (polyamide) stainless steel thread: zinc-chrome plated, polymeric coated (polyamide) with stainless steel thread according to EN 10088-3:2014, 1.4305 (AISI 303) or 1.4570 (AISI 303Cu)

Rogger RSD-System Anchor

Product description
Dimensions and materials

Annex A 3

Specifications of intended use

Anchorage subject to:

- Static and quasi-static loads
- Redundant non-structural systems

Base materials:

- Reinforced or unreinforced compacted normal weight concrete without fibres with strength classes \geq C12/15 (base material group a) according to EN 206:2013 + A1:2016, Annex B 2.
- Solid brick masonry (base material group b) according to Annex B 2.
Note: The characteristic resistance is also valid for larger brick sizes and higher compressive strength of the masonry unit.
- Hollow brick masonry (base material group c) according to Annex B 2.
- Mortar strength class of the masonry \geq M2,5 according to EN 998-2:2010.
- For other base materials of the base material group a, b or c the characteristic resistance of the anchor may be determined by job site tests according to TR 051:2018-04.

Temperature Range:

- b: -40°C to +80°C (max long term temperature +50°C and max short term temperature +80°C)
- c: -40°C to +50°C (max long term temperature +30°C and max short term temperature +50°C)

Use conditions (Environmental conditions):

- Structures subject to dry internal conditions.
- The specific screws may also be used in structures subject to external atmospheric exposure, if the area of the head of the screw is protected against moisture and driving rain after mounting of the fixing unit in this way, that intrusion of moisture into the anchor shaft is prevented. Therefore there shall be an external cladding or a ventilated rainscreen mounted in front of the head of the screw and the head of the screw itself shall be coated with a soft plastic, permanently elastic bitumen-oil-combination coating (e. g. undercoating or body cavity protection for cars).
- Structures subject to external atmospheric exposure (including industrial and marine environment) and to permanently damp internal condition, if no particular aggressive conditions exist.

Note: Particular aggressive conditions are e.g. permanent, alternating immersion in seawater or the splash zone of seawater, chloride atmosphere of indoor swimming pools or atmosphere with extreme chemical pollution (e.g. in desulphurization plants or road tunnels where de-icing materials are used).

Design:

- The anchorages are designed in accordance with TR 064:2018-05 under the responsibility of an engineer experienced in anchorages and masonry work.
- Verifiable calculation notes and drawings shall be prepared taking account of the loads to be anchored, the nature and strength of the base materials and the dimensions of the anchorage members as well as of the relevant tolerances. The position of the anchor is indicated on the design drawings.

Installation:

- Hole drilling by the drill modes according to Annex B 3 and B 4 for base material group a, b and c.
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site
- Installation temperature \geq -20 °C.
- Exposure to UV due to solar radiation of the anchor not protected \leq 6 weeks.
- No ingress of water in the core hole $<$ 0°C

Rogger RSD-System Anchor

**Intended use
Specifications**

Annex B 1

Table B2.1: Base material: Concrete and solid and hollow or perforated masonry units

Base material	Format	Dimensions [mm] Geometry	Minimum compressive- strength [N/mm ²]	Bulk density [kg/dm ³]
Concrete (base material group "a")				
Concrete ≥ C12/15 according to EN 206:2013 + A1:2016			15 (f _{ck,cube})	
Solid and hollow or perforated masonry (base material group "b", "c")				
Solid clay brick Mz according to EN 771-1:2011+A1:2015 e.g. Wienerberger GmbH	≥ 2DF	≥ 240x115x113	10 20	≥ 1,8
Hollow clay brick HLz according to EN 771-1:2011+A1:2015	≥ NF	≥ 240x115x71 refer Annex B 3, Figure 1	4 6 8 10 12	≥ 0,9
Sand-lime solid brick KS according to EN 771-2:2011+A1:2015	≥ NF	≥ 240x115x71	10 20 28	≥ 1,8
Sand-lime hollow brick KSL according to EN 771-2:2011+A1:2015 e.g. KS Wemding GmbH	≥ 3DF	≥ 240x175x113 refer Annex B 3, Figure 2	6 8 10 12 16 20	≥ 1,4
Lightweight concrete solid brick – V and Vbl according to EN 771-3:2011+A1:2015 e.g. Bisotherm GmbH	≥ 2DF	≥ 240x115x113	2 4 6	≥ 1,2
Lightweight concrete hollow brick – Hbl according to EN 771-3:2011+A1:2015 e.g. Bisotherm GmbH	≥ 12DF	≥ 490x175x238 refer Annex B 3, Figure 3	2 4 6	≥ 1,2

Rogger RSD-System Anchor

Intended use

Base material, base material group a, b and c

Annex B 2

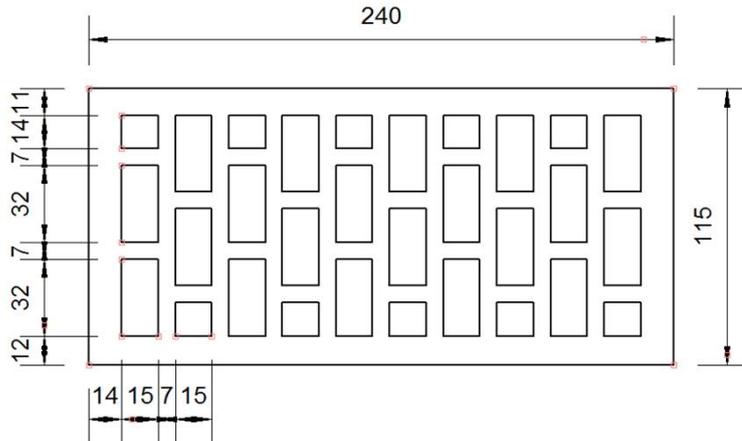


Figure 1: Hollow clay brick HLz

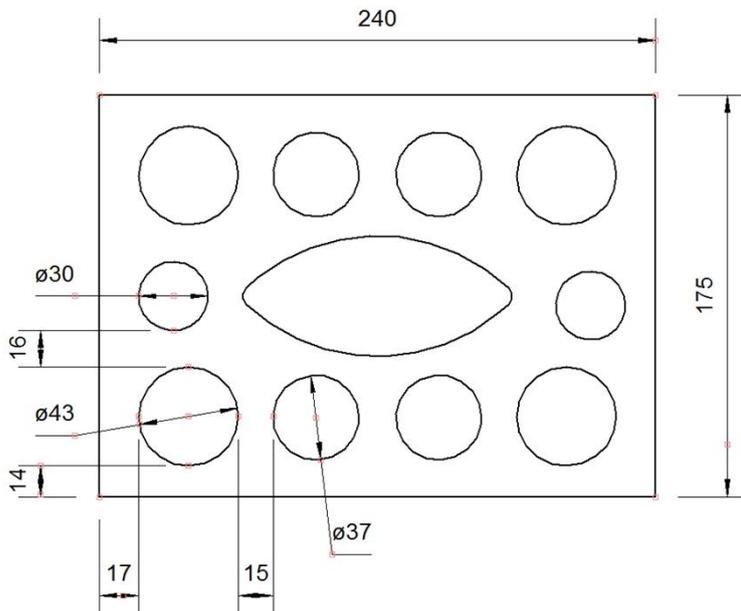


Figure 2: Sand-lime hollow brick KSL

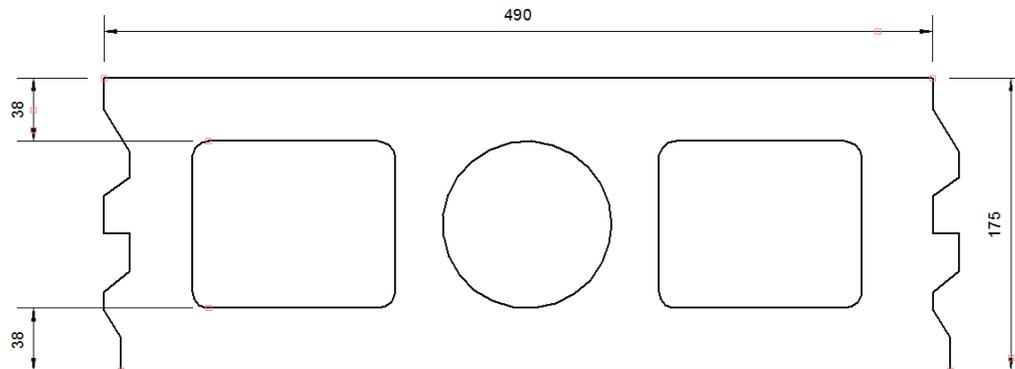


Figure 3: Lightweight concrete hollow brick Hbl

Rogger RSD-System Anchor

Intended use
Base material group c – figures of hollow or perforated masonry

Annex B 3

Table B3.1: Installation parameters for concrete

Anchor type			RSD 10
Drill hole diameter	$d_0 =$	[mm]	10
Cutting diameter of drill bit	$d_{cut} \leq$	[mm]	10,45
Depth of drill hole to deepest point ¹⁾	$h_1 \geq$	[mm]	95
Drill method		[-]	Hammer drilling
Overall plastic anchor embedment depth ¹⁾	$h_{nom} =$	[mm]	70
Diameter of clearance hole in the fixture (polymeric thread)	$d_f =$	[mm]	11,5
Diameter of clearance hole in the fixture (stainless steel thread)	$d_f =$	[mm]	12,5
Thickness of fixture (based on the nominal screwing depth)	$t_{fix} \geq$	[mm]	100
	$t_{fix} \leq$	[mm]	375
nominal screwing depth	$h_s =$	[mm]	75
tolerance of the screwing depth		[mm]	$65 \leq h_s \leq 90$
Thickness of non-loadbearing layer	$t_{tol} \leq$	[mm]	25

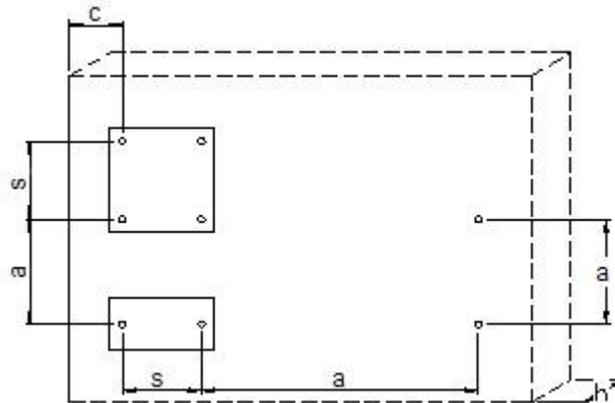
¹⁾ See Annex A 1

Table B3.2: Minimum thickness of member, edge distance and anchor spacing in concrete

Fixing points with a spacing $a \leq s_{cr,N}$ are considered as a group with a max. characteristic resistance $N_{Rk,p}$ according to Annex C 1. For $a > s_{cr,N}$ the anchors are considered as single anchors, each with a characteristic resistance $N_{Rk,p}$ acc. to Annex C 1.

Anchor type			RSD 10	
concrete			$\geq C16/20$	C12/15
minimum thickness of member	h_{min}	[mm]	125	125
characteristic edge distance	$c_{cr,N}$	[mm]	80	110
minimum edge distance	c_{min}	[mm]	70	100
characteristic / minimum spacing	$s_{cr,N} / s_{min}$	[mm]	70	100

Minimum edge distance and spacing in concrete



Rogger RSD-System Anchor

Intended use

Installation parameters, edge distances and spacing for use in concrete

Annex B 4

Table B4.1: Installation parameters for solid bricks¹⁾

Anchor size			RSD 10	
Drill hole diameter	$d_0 =$	[mm]	10	
Cutting diameter of drill bit	$d_{cut} \leq$	[mm]	10,45	
Depth of drill hole to deepest point	$h_1 \geq$	[mm]	95	
Drill method		[-]	Hammer drilling	
Overall plastic anchor embedment depth ²⁾	$h_{nom} =$	[mm]	70	
Diameter of clearance hole in the fixture (polymeric thread)	$d_f =$	[mm]	11,5	
Diameter of clearance hole in the fixture (stainless steel thread)	$d_f =$	[mm]	12,5	
Thickness of fixture (based on the nominal screwing depth)	$t_{fix} \geq$	[mm]	100	
	$t_{fix} \leq$	[mm]	375	
nominal screwing depth	$h_s =$	[mm]	75	
tolerance of the screwing depth		[mm]	$65 \leq h_s \leq 90$	
Thickness of non-loadbearing layer	$t_{tol} \leq$	[mm]	25	

¹⁾ Mz, KS, V and Vbl according to Table B2.1

²⁾ See Annex A 1

Table B4.2: Installation parameters for hollow or perforated bricks¹⁾

Anchor size			RSD 10	
Drill hole diameter	$d_0 =$	[mm]	10	
Cutting diameter of drill bit	$d_{cut} \leq$	[mm]	10,45	
Depth of drill hole to deepest point	$h_1 \geq$	[mm]	95	135
Drill method		[-]	Rotary drilling	
Overall plastic anchor embedment depth	$h_{nom} =$	[mm]	70	110 ³⁾
Diameter of clearance hole in the fixture (polymeric thread)	$d_f =$	[mm]	11,5	
Diameter of clearance hole in the fixture (stainless steel thread)	$d_f =$	[mm]	12,5	
Thickness of fixture (based on the nominal screwing depth)	$t_{fix} \geq$	[mm]	100	60
	$t_{fix} \leq$	[mm]	375	335
nominal screwing depth	$h_s =$	[mm]	75	115
tolerance of the screwing depth		[mm]	$65 \leq h_s \leq 90$	$105 \leq h_s \leq 130$
Thickness of non-loadbearing layer	$t_{tol} \leq$	[mm]	25	

¹⁾ HLz, KSL und Hbl according to Table B2.1

²⁾ See Annex A 1

³⁾ Only for the oblate version for hollow or perforated masonry

Rogger RSD-System Anchor

Intended use

Installation parameters for masonry

Annex B 5

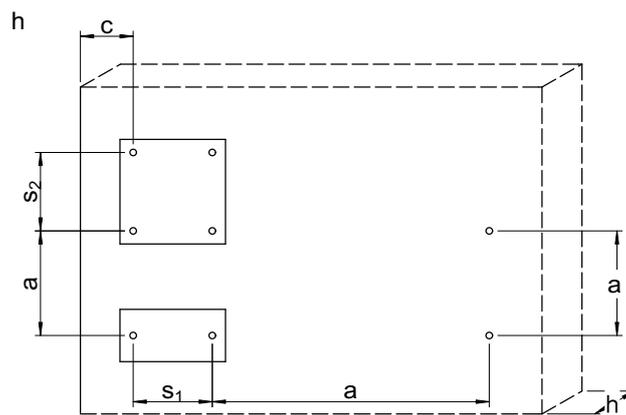
Table B5.1: Minimum thickness of member, edge distance and anchor spacing in masonry

			RSD 10	
Overall plastic anchor embedment depth ²⁾	h_{nom}	[mm]	70	110
Minimum thickness of member	h_{min}	[mm]	125 ¹⁾	165 ¹⁾
Single anchor				
Minimum spacing	a_{min}	[mm]	100	100
Minimum edge distance	c_{min}	[mm]	100	100
Anchor group				
Spacing perpendicular to free edge	$s_{1,min}$	[mm]	100	100
Spacing parallel to free edge	$s_{2,min}$	[mm]	100	100
Minimum edge distance	c_{min}	[mm]	100	100

¹⁾ depends on the brick size

²⁾ see Annex A 1

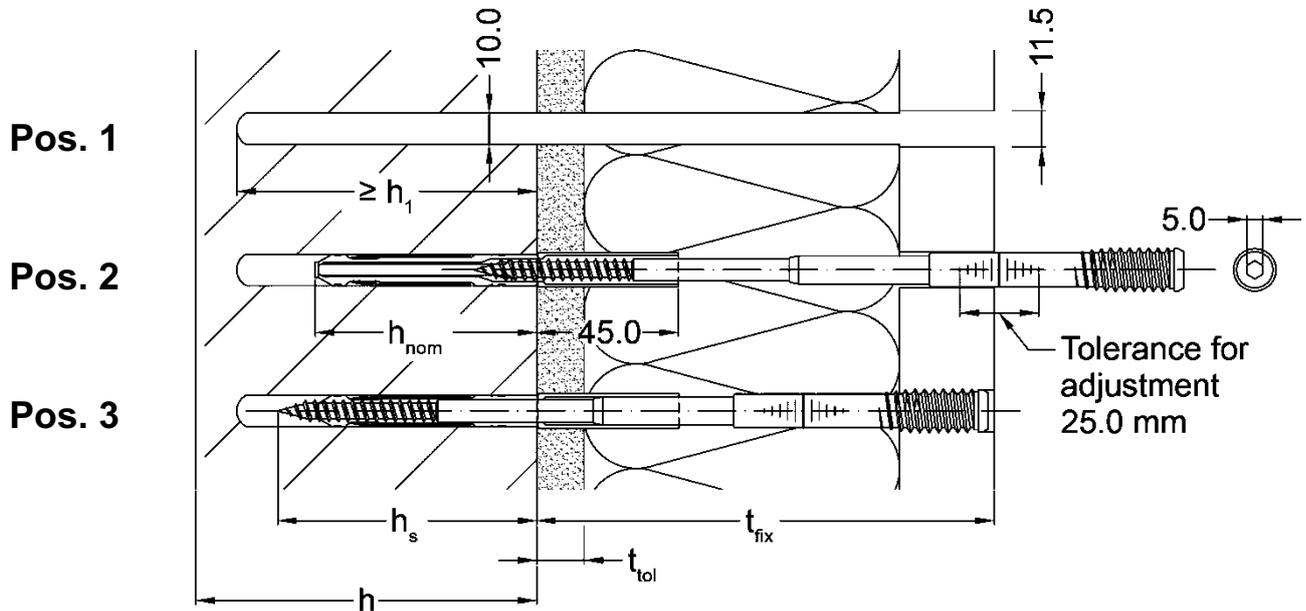
Minimum edge distance and spacing in masonry



Rogger RSD-System Anchor

Intended use
Edge distances and spacing for use in masonry

Annex B 6



Installation instructions special screw with polymeric thread

- provisional positioning of the battens at the designated place
- drilling of the wooden battens using a wood drill \varnothing 11,5 mm according to Pos. 1
- drilling of the base material using a drill \varnothing 10 mm and a drilling method according to the base material (Tables B3.1, B4.1, B4.2) according to Pos. 1
- holes to be cleaned of drilling dust
- insertion of the pre-assembled anchor / screw combination in the drill hole; the surface of the battens has to be positioned within the rhombic label of the screw according to Pos. 2
- accurate adjustment of the wooden battens
- screwing in the screw into the polymeric sleeve and the wooden battens until the head of the screw is at least flush with the surface of the battens or 2 mm underneath this surface at most according to Pos. 3

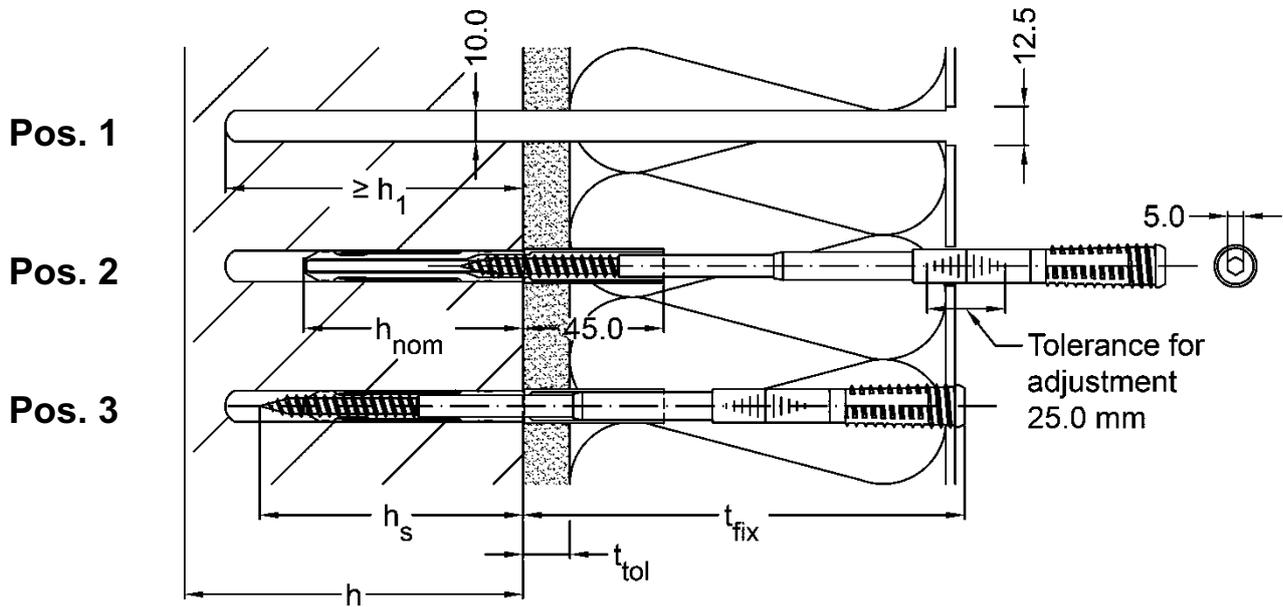
Determination of the required length of the screw

- screw length = $t_{fix} + h_s$
- h_s refer to Tables B3.1, B4.1, B4.2

Rogger RSD-System Anchor

Intended use
Installation instructions (polymeric thread)

Annex B 7



Installation instructions special screw with stainless steel thread

- provisional positioning of the aluminium profile at the designated place
- drilling of the base material using a drill \varnothing 10 mm and a drilling jig, drilling method according to the base material (Tables B3.1, B4.1, B4.2) according to Pos. 1
- holes to be cleaned of drilling dust
- insertion of the pre-assembled anchor / screw combination in the drill hole; the surface of the aluminium profile has to be positioned within the rhombic label of the screw according to Pos. 2
- accurate adjustment of the aluminium profile
- screwing in the screw into the polymeric sleeve and the aluminium profile until the head of the screw is rested on the surface of aluminium profile according to Pos. 3

Determination of the required length of the screw

- screw length = $t_{\text{fix}} + h_{\text{s}}$
- h_{s} refer to Tables B3.1, B4.1, B4.2

Rogger RSD-System Anchor

Intended use
Installation instructions (stainless steel thread)

Annex B 8

Table C1.1: Characteristic resistance of the special screw

Steel failure (special screw)			RSD 10
Characteristic tension resistance	$N_{Rk,s}$	[kN]	22,1
Partial safety factor	$\gamma_{Ms}^{1)}$	[-]	1,4
Characteristic shear resistance	$V_{Rk,s}$	[kN]	14,4
Characteristic bending resistance	$M_{Rk,s}$	[Nm]	40,4
Partial safety factor	$\gamma_{Ms}^{1)}$	[-]	1,5

Table C1.2: Characteristic resistance for pull-out failure for use in concrete (base material group „a“)

Pull-out failure (plastic sleeve)				
Concrete \geq C16/20				
Characteristic resistance	$30^{\circ}C^{2)} / 50^{\circ}C^{3)}$	$N_{Rk,p}$	[kN]	3,5
	$50^{\circ}C^{2)} / 80^{\circ}C^{3)}$	$N_{Rk,p}$	[kN]	2,5
Partial safety factor	$\gamma_{Mc}^{1)}$		[-]	1,8
Concrete C12/15				
Characteristic resistance	$30^{\circ}C^{2)} / 50^{\circ}C^{3)}$	$N_{Rk,p}$	[kN]	2,5
	$50^{\circ}C^{2)} / 80^{\circ}C^{3)}$	$N_{Rk,p}$	[kN]	2,0
Partial safety factor	$\gamma_{Mc}^{1)}$		[-]	1,8

- 1) In absence of other national regulations
 2) Maximum long term temperature
 3) Maximum short term temperature

Table C1.3: Characteristic resistance under fire exposure in concrete C20/25 to C50/60 in any load direction, no permanent centric tension load and without lever arm, fastening of façade systems

Fire resistance class	$F_{Rk,fi,90}$	$\gamma_{M,fi}^{1)}$
R 90	$\leq 0,8$ kN	1,0

- 1) In absence of other national regulations

Table C1.4: Displacements¹⁾ under tension and shear loading in concrete and masonry

Anchor type	Tension load			Shear load		
	$F^{2)}=N$ [kN]	δ_{N0} [mm]	$\delta_{N\infty}$ [mm]	$F^{2)}=V$ [kN]	δ_{V0} [mm]	$\delta_{V\infty}$ [mm]
RSD 10	1,4	0,26	0,30	1,4	0,67	1,01

- 1) Valid for all ranges of temperatures
 2) Intermediate values determined by linear interpolation

Rogger RSD-System Anchor

Performances

Characteristic resistance of the special screw, characteristic resistance in concrete, displacements

Annex C 1

**Table C2.1: Characteristic resistance $F_{Rk}^{1)}$ in [kN] for single anchor in solid bricks
(base material group „b“)**

Anchor size			RSD 10						
Temperature range			30°C ³⁾ / 50°C ⁴⁾			50°C ³⁾ / 80°C ⁴⁾			
Base Material, normalised mean compressive strength f_b			Mz	KS	V / Vbl	Mz	KS	V / Vbl	
Solid brick, $f_b \geq 2 \text{ N/mm}^2$	$F_{Rk} =$	[kN]			0,5			0,4	
Solid brick, $f_b \geq 4 \text{ N/mm}^2$	$F_{Rk} =$	[kN]			1,2			0,9	
Solid brick, $f_b \geq 6 \text{ N/mm}^2$	$F_{Rk} =$	[kN]			1,5			1,2	
Solid brick, $f_b \geq 10 \text{ N/mm}^2$	$F_{Rk} =$	[kN]	2,5	1,2		2,0	1,2		
Solid brick, $f_b \geq 20 \text{ N/mm}^2$	$F_{Rk} =$	[kN]	4,0	2,5		3,0	2,5		
Solid brick, $f_b \geq 28 \text{ N/mm}^2$	$F_{Rk} =$	[kN]		4,0			3,5		
Partial safety factor		$\gamma_{Mm}^{2)}$	[-]						2,5

**Table C2.2: Characteristic resistance $F_{Rk}^{1)}$ in [kN] for single anchor in hollow or perforated bricks
(base material group „c“)**

Anchor size			RSD 10						
Temperature range			30°C ³⁾ / 50°C ⁴⁾			50°C ³⁾ / 80°C ⁴⁾			
Base Material normalised mean compressive strength f_b			HLz	KSL	Hbl	HLz	KSL	Hbl	
Hollow brick, $f_b \geq 2 \text{ N/mm}^2$	$F_{Rk} =$	[kN]			0,30				
Hollow brick, $f_b \geq 4 \text{ N/mm}^2$	$F_{Rk} =$	[kN]	0,30		0,60			0,50	
Hollow brick, $f_b \geq 6 \text{ N/mm}^2$	$F_{Rk} =$	[kN]	0,50	0,40	0,90	0,40	0,40	0,75	
Hollow brick, $f_b \geq 8 \text{ N/mm}^2$	$F_{Rk} =$	[kN]	0,75	0,60		0,60	0,50		
Hollow brick, $f_b \geq 10 \text{ N/mm}^2$	$F_{Rk} =$	[kN]	0,90	0,75		0,75	0,60		
Hollow brick, $f_b \geq 12 \text{ N/mm}^2$	$F_{Rk} =$	[kN]	1,20	0,90		0,90	0,75		
Hollow brick, $f_b \geq 16 \text{ N/mm}^2$	$F_{Rk} =$	[kN]		1,20			0,90		
Hollow brick, $f_b \geq 20 \text{ N/mm}^2$	$F_{Rk} =$	[kN]		1,50			1,20		
Partial safety factor		$\gamma_{Mm}^{2)}$	[-]						2,5

- 1) Characteristic resistance F_{Rk} for tension, shear or combined tension and shear loading.
- 2) In absence of other national regulations
- 3) Maximum long term temperature
- 4) Maximum short term temperature

Rogger RSD-System Anchor

Performances

Characteristic resistance for use in solid bricks and in hollow or perforated bricks

Annex C 2