

De economische all-rounder met Europese Technische Goedkeuring (ETA) voor massieve en holle bouwmaterialen



UITVOERINGEN

- elektrolytisch verzinkt staal
- roestvast staal
- thermisch verzinkt staal

BOUWMATERIALEN

Goedgekeurd voor:

- Beton C12/15
- Geperforeerde baksteen
- Holle bouwsteen van licht beton
- Geperforeerde kalkzandsteen
- Volle kalkzandsteen
- Cellenbeton
- Volle bouwsteen van normaal- en lichtbeton
- Volle baksteen
- Thermische isolatieblokken

Tevens geschikt voor:

- Natuursteen met hoge dichtheid
- Gipsblokken

GOEDKEURINGEN



VOORDELEN

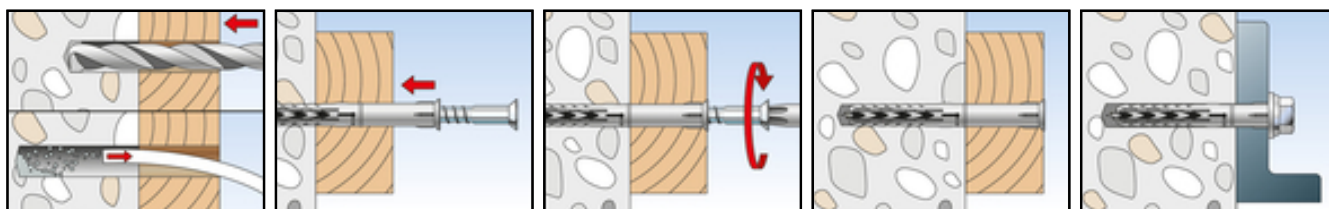
- De speciale werking maakt bij een verankeringsdiepte van slechts 50 mm het gebruik in massieve en geperforeerde bouwmaterialen mogelijk en zorgt zo voor een efficiënte bevestiging.
- De ETA-beoordeling dekt het gebruik in vele massieve en geperforeerde bouwmaterialen en garandeert daarmee een veilige bevestiging.
- De speciaal ontwikkelde combinatie van constructieplug en veiligheidsschroef zorgt voor een optimaal gebruik. De plug trekt voelbaar en biedt daardoor meer montagecomfort.
- Een omvangrijke assortiment met de diameters 6, 8 en 10 mm, met een bruikbare lengte tot 210 mm.

TOEPASSINGEN

- Gevel-, plafond en dakconstructies van hout en metaal
- Ramen
- Hekwerken en deuren
- Kledingkasten
- Hangende keukenkasten
- Rachelwerk
- Beams
- TV consoles
- Wall covering
- Metal brackets
- Metal supports
- Kabelkanalen
- Cable trays

FUNCTIE

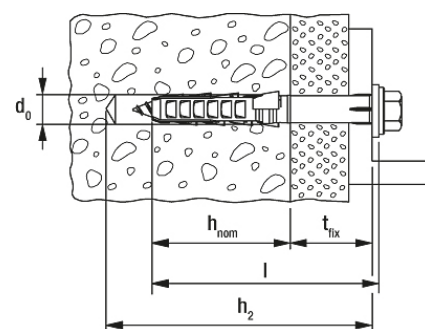
- De SXR is geschikt voor de doorsteekmontage.
- De SXR spreidt in massieve bouwmaterialen.
- In geperforeerde bouwmaterialen worden de lasten rond de stenen verdikkingen verdeeld.
- Bij betonblokken alleen draaiend boren (zonder slagmechanisme).
- Voor de bevestiging van houtconstructies wordt geadviseerd om schroeven met verzonken kop te gebruiken, bij metaalconstructies worden dat pluggen met een brede hulsrand en met zeskante kop met voorgevormde onderlegging.



TECHNISCHE GEGEVENS



Constructieplug SXR-FUS



Elektrolytisch verzinkt

Artikelnaam	Art.-Nr.	Goed-keuring	DIBt goedkeuring	Boorgatdiameter d_0 [mm]	Min. boorgatdiepte bij doorsteekmontage h_2 [mm]	Min. verankeringsdiepte h_{nom} (h_v) [mm]
SXR 10 x 52 FUS	502456	■		10	62	50
SXR 10 x 60 FUS	046329	■		10	70	50
SXR 10 x 80 FUS	046330	■		10	90	50
SXR 10 x 100 FUS	046331	■		10	110	50
SXR 10 x 120 FUS	046332	■		10	130	50
SXR 10 x 140 FUS	046333	■		10	150	50
SXR 10 x 160 FUS	046334	■		10	170	50
SXR 10 x 180 FUS	046335	■		10	190	50
SXR 10 x 200 FUS	046336	■		10	210	50
SXR 10 x 230 FUS	046337	■		10	240	50
SXR 10 x 260 FUS	046338	■		10	270	50

Roestvast staal A4, corrosieweerstandsklasse III

Artikelnaam	Art.-Nr.	Goed-keuring	DIBt goedkeuring	Boorgatdiameter d_0 [mm]	Min. boorgatdiepte bij doorsteekmontage h_2 [mm]	Min. verankeringsdiepte $h_{nom} (h_v)$ [mm]
SXR 10 x 60 FUS A4	046339	■		10	70	50
SXR 10 x 80 FUS A4	046340	■		10	90	50
SXR 10 x 100 FUS A4	046342	■		10	110	50
SXR 10 x 120 FUS A4	046343	■		10	130	50
SXR 10 x 140 FUS A4	046344	■		10	150	50
SXR 10 x 160 FUS A4	046345	■		10	170	50
SXR 10 x 180 FUS A4	046361	■		10	190	50
SXR 10 x 200 FUS A4	046362	■		10	210	50
SXR 10 x 230 FUS A4	046363	■		10	240	50
SXR 10 x 260 FUS A4	046364	■		10	270	50

Thermisch verzinkt

		Goed-keuring	DIBt goedkeuring	Boorgatdiameter d_0	Min. boorgatdiepte bij doorsteekmontage h_2	Min. verankeringsdiepte $h_{nom} (h_v)$
Artikelnaam	Art.-Nr.			[mm]	[mm]	[mm]
SXR 10 x 100 FUS hdg	509539			10	110	50

LOADS

Frame fixing SXR⁴⁾

Highest permissible loads¹⁾ for a single anchor for multiple fixings of non-structural applications in masonry. For the design the complete approval ETA-07/0121 has to be considered.

Type	compressive brick strength f_b [N/mm ²]	brick type, naming acc. DIN [-] [-]	min. anchorage depth h_{nom} [mm]	min. member thickness h_{min} [mm]	Solid brick masonry and perforated brick masonry		
					permissible load F_{perm} ³⁾⁵⁾ [kN]	min. spacing s_{min} ²⁾ [mm]	min. edge distance c_{min} ²⁾ [mm]
Solid brick Mz							
SXR 8	≥ 20	Mz	50	100	0,71	100	100
SXR 10	≥ 20	Mz	50	100	0,86	100	100
Solid sand-lime brick and solid block KS							
SXR 8	≥ 10	KS	50	100	0,71	100	100
SXR 10	≥ 10	KS	50	100	0,86	100	100
Vertically perforated brick HLz							
SXR 8	≥ 20	HLz	50	100	0,34	100	100
SXR 10	≥ 12	HLz	50	100	0,26	100	100
SXR 10	≥ 20	HLz	50	100	0,71	100	100
Perforated sand-lime brick KSL							
SXR 8	≥ 12	KSL	50	100	0,57	100	100
SXR 10	≥ 12	KSL	50	100	0,57	100	100
Hollow block of lightweight aggregate concrete Hbl							
SXR 8	≥ 10	Hbl	50	100	0,71	100	100
SXR 10	≥ 6	Hbl	50	100	0,71	100	100
SXR 10	≥ 10	Hbl	50	100	0,71	100	100
Solid brick and solid block of lightweight aggregate concrete V							
SXR 8	≥ 2	V	50	100	0,34	100	100
SXR 10	≥ 2	V	50	100	0,21	100	100
Aerated concrete blocks and reinforced panels AAC							
SXR 10	≥ 2	AAC	50	100	0,14 ⁷⁾	200	100
SXR 10	≥ 6	AAC	50	100	0,27	200	100

¹⁾ The required partial safety factors for material resistance as well as a partial safety factor for load actions $\gamma_L = 1,4$ are considered. As a single anchor counts e.g. an anchor with a minimum spacing s_{min} according table 11 resp. table 15 of the approval.

²⁾ Minimum possible axial spacings (anchor group) resp. edge distance while reducing the permissible load. The combination of the given min. spacing and min. edge distance is not possible. One of them has to be increased according approval.

³⁾ Valid for tensile load, shear load and oblique load under any angle. For combinations of tensile loads, shear loads and bending moments see approval.

⁴⁾ Valid for zinc coated screws and for screws made of stainless steel. For exterior use of the coated screws measures against incoming humidity according approval have to be taken.

⁵⁾ The given values for hollow or perforated masonry apply for rotary drilling (without impact) given loads are reference values which may change due to type of brick and manufacture embedment depth is higher than $h_{nom} = 50$ mm, job site tests have to be carried out.

⁶⁾ Valid for temperatures in the substrate up to +50 °C (resp. short term up to 80 °C). For temperatures up to 30 °C higher permissible loads may be possible.

⁷⁾ Drill hole created by punching.

LOADS

Frame fixing SXR ⁴⁾

Highest permissible loads^{1) 6)} for a single anchor for multiple fixings of non-structural applications in normal concrete \geq C12/15 resp. \geq B15. For the design the complete approval ETA-07/0121 has to be considered.

Type	Min. anchorage depth h_{nom} [mm]	Min. member thickness h_{min} [mm]	Cracked or Non-cracked concrete			
			Permissible tensile load $N_{perm}^{3)}$ [kN]	Permissible shear load $V_{perm}^{3)}$	Min. spacing $s_{min}^{2)}$ [mm]	Min. edge distance $c_{min}^{2)}$ [mm]
SXR 8	50	100	1,0	1,2 ⁵⁾	50	50
SXR 10	50	100	1,8	2,0 ⁵⁾	50	60

¹⁾ The required partial safety factors for material resistance as well as a partial safety factor for load actions $\gamma_L = 1,4$ are considered. As an single anchor counts e.g. an anchor with a spacing $s \geq s_{cr,N}$ and an edge distance $c \geq c_{cr,N}$ according table 8 of the approval.

²⁾ Minimum possible axial spacings (anchor group) resp. edge distance for concrete \geq C16/20 while reducing the permissible load. The combination of the given min. spacing and min. edge distance is not possible. One of them has to be increased according approval. Values for concrete C12/15 see approval.

³⁾ For combinations of tensile loads, shear loads, bending moments as well as reduced edge distances or spacings (anchor groups) see approval.

⁴⁾ Valid for zinc coated screws and for screws made of stainless steel. For exterior use of the zinc coated screws measures against incoming humidity according approval have to be taken.

⁵⁾ The permissible shear load determined acc. ETAG 020, Annex C considers exclusively steel failure of the screw. For SXR 8 it amounts $V_{perm} = 4,2$ kN for galvanised screws and $V_{perm} = 3,4$ kN for screws made of stainless steel. For SXR 10 it amounts $V_{perm} = 6,0$ kN. Due to that the expected displacements will disable the proper function of the fixture a maximum shear load on the base table 7 of the approval is recommended.

⁶⁾ Valid for temperatures in the substrate up to +50 °C (resp. short term up to 80 °C). For long term temperatures up to 30 °C higher permissible loads may be possible.

LOADS

Frame fixing SXR

Highest recommended loads¹⁾ for a single anchor.

The given loads are valid for wood screws with the specified diameter.

Type			SXR 6
Screw diameter	\emptyset	[mm]	4,5
Min. edge distance in concrete	a_r	[mm]	50
Recommended loads in the respective base material $F_{rec}^{2)}$			
Concrete	\geq C20/25	[kN]	0,25
Solid brick	\geq Mz 12	[kN]	0,20
Solid sand-lime brick	\geq KS 12	[kN]	0,20
Vertically perforated brick	\geq Hlz 12 ($\rho \geq 1,0$ kg/dm ³)	[kN]	0,10
Perforated sand-lime brick	\geq KSL 12	[kN]	0,20

¹⁾ Required safety factors are considered.

²⁾ Valid for tensile load, shear load and oblique load under any angle.