



UITVOERINGEN

- elektrolytisch verzinkt staal
- roestvast staal

BOUWMATERIALEN

Goedgekeurd voor:

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

Tevens geschikt voor:

- Natuursteen met hoge dichtheid
- Gipsblokken

GOEDKEURINGEN



GOEDKEURINGEN

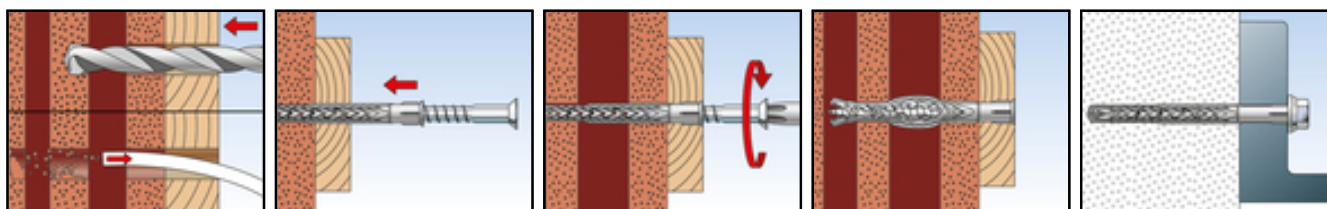


TOEPASSINGEN

- Gevel-, plafond en dakconstructies van hout en metaal
- Facade substructures under compression load (e.g. distance installation without a wall bracket)
- Ramen
- Hekwerken en deuren
- Kledingkasten
- Hangende keukenkasten
- Rachelwerk
- Beams
- TV consoles
- Wall covering
- Metal brackets
- Metal supports
- Kabelkanalen
- Cable trays

TOEPASSINGEN

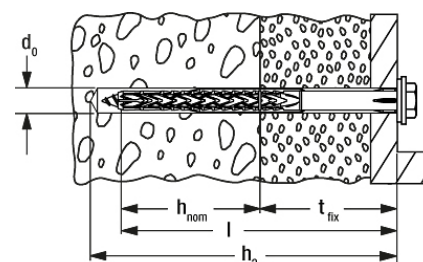
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TECHNISCHE GEGEVENS



Constructie-/ kozijnplug SXRL-FUS



Elektrolytisch verzinkt

Artikelnaam	Art.-Nr.	DIBt goedkeuring	Goed-keuring	Boordiameter d_0 [mm]	Pluglengte l [mm]	Min. boorgatdiepte bij doorsteekmontage h_2 [mm]	Nuttige lengte bij verankering diepte 50 mm [mm]	Nuttige lengte bij verankering diepte 70 mm t_{fix} [mm]	Nuttige lengte bij verankering diepte 90 mm t_{fix} [mm]
SXRL 8 x 60 FUS	540127		■	8	60	70	10		
SXRL 8 x 80 FUS	540129		■	8	80	90	30	10	
SXRL 8 x 100 FUS	540130		■	8	100	110	50	30	10
SXRL 8 x 120 FUS	540131		■	8	120	130	70	50	30
SXRL 8 x 140 FUS	540133		■	8	140	150	90	70	50
SXRL 8 x 160 FUS	540134		■	8	160	170	110	90	70
SXRL 10 x 80 FUS	522719		■	10	80	90	30	10	
SXRL 10 x 100 FUS	522720		■	10	100	110	50	30	10
SXRL 10 x 120 FUS	522721		■	10	120	130	70	50	30
SXRL 10 x 140 FUS	522723		■	10	140	150	90	70	50
SXRL 10 x 160 FUS	522724		■	10	160	170	110	90	70
SXRL 10 x 180 FUS	522725		■	10	180	190	130	110	90
SXRL 10 x 200 FUS	522726		■	10	200	210	150	130	110
SXRL 10 x 230 FUS	522727		■	10	230	240	180	160	140
SXRL 10 x 260 FUS	522728		■	10	260	270	210	190	170
SXRL 10 x 290 FUS	522729		■	10	290	300	240	220	200
SXRL 14 x 80 FUS	530946		■	14	80	95		10	
SXRL 14 x 100 FUS	530947		■	14	100	115		30	10
SXRL 14 x 120 FUS	530948		■	14	120	135		50	30
SXRL 14 x 140 FUS	530949		■	14	140	155		70	50
SXRL 14 x 160 FUS	530950		■	14	160	175		90	70
SXRL 14 x 180 FUS	530951		■	14	180	195		110	90
SXRL 14 x 200 FUS	530952		■	14	200	215		130	110
SXRL 14 x 230 FUS	530953		■	14	230	245		160	140
SXRL 14 x 260 FUS	530954		■	14	260	275		190	170

Roestvast staal A4, corrosieweerstandsklasse III

Artikelnaam	Art.-Nr.	DIBt goedkeuring	Goed-keuring	Boordiamet er d_0 [mm]	Pluglengte l [mm]	Min. boorgatdiep te bij doorsteekm ontage h_2 [mm]	Nuttige lengte bij verankering sdiepte 50 mm [mm]	Nuttige lengte bij verankering sdiepte 70 mm t_{fix} [mm]	Nuttige lengte bij verankering sdiepte 90 mm t_{fix} [mm]
SXRL 8 x 60 FUS A4	540135		■	8	60	70	10		
SXRL 8 x 80 FUS A4	540136		■	8	80	90	30	10	
SXRL 8 x 100 FUS A4	540137		■	8	100	110	50	30	10
SXRL 10 x 80 FUS A4	522730		■	10	80	90	30	10	
SXRL 10 x 100 FUS A4	522731		■	10	100	110	50	30	10
SXRL 10 x 120 FUS A4	522732		■	10	120	130	70	50	30
SXRL 10 x 140 FUS A4	522733		■	10	140	150	90	70	50
SXRL 10 x 160 FUS A4	522734		■	10	160	170	110	90	70
SXRL 10 x 180 FUS A4	522735		■	10	180	190	130	110	90
SXRL 10 x 200 FUS A4	522736		■	10	200	210	150	130	110
SXRL 10 x 230 FUS A4	522737		■	10	230	240	180	160	140
SXRL 10 x 260 FUS A4	522738		■	10	260	270	210	190	170
SXRL 10 x 290 FUS A4	522739		■	10	290	300	240	220	200
SXRL 14 x 80 FUS A4	530955		■	14	80	95		10	
SXRL 14 x 100 FUS A4	530956		■	14	100	115		30	10
SXRL 14 x 120 FUS A4	530957		■	14	120	135		50	30
SXRL 14 x 140 FUS A4	530958		■	14	140	155		70	50
SXRL 14 x 160 FUS A4	530959		■	14	160	175		90	70
SXRL 14 x 180 FUS A4	530960		■	14	180	195		110	90
SXRL 14 x 200 FUS A4	530961		■	14	200	215		130	110
SXRL 14 x 230 FUS A4	530962		■	14	230	245		160	140
SXRL 14 x 260 FUS A4	530963		■	14	260	275		190	170

LOADS

Frame fixing SXRL³⁾

Highest recommended loads¹⁾ for a single anchor as part of a multiple fixing of non-structural systems.
The given loads are valid for wood screws with the specified diameter.

Type			SXRL 8		
Anchorage depth	h_{ef}	[mm]	50	70	90
Diameter of the wood screw	$\emptyset$	[mm]	6,0	6,0	6,0
Min. edge distance concrete	a_r	[mm]	60	80	100
Recommended loads in the respective base material F_{rec}²⁾					
Concrete	$\geq C20/25$	[kN]	0,60	1,00	1,00
Solid brick	$\geq Mz 12$	[kN]	0,45	0,60	0,60
Solid sand-lime brick	$\geq KS 12$	[kN]	0,40	0,50	0,50
Vertically perforated brick	$\geq Hlz 12$ ($\rho \geq 1,0 \text{ kg/dm}^3$)	[kN]	0,15	0,15	0,15
Perforated sand-lime brick	$\geq KSL 12$	[kN]	0,10	0,40	0,40
Aerated concrete	AAC 2	[kN]	-	0,10	0,10
Aerated concrete	AAC 4	[kN]	-	0,15	0,20

¹⁾ Required safety factors are considered.

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

³⁾ Valid for zinc coated screws and for screws made of stainless steel. For exterior use of the zinc coated screws measures against incoming humidity have to be taken.

LOADS

Frame fixing SXRL⁴⁾

Highest permissible loads¹⁾²⁾ of a single anchor as part of a multiple fixing of non-structural systems.
For the design the complete assessment ETA-07/0121 has to be considered.

Product			SXRL							
Anchor diameter		[mm]	Ø 8			Ø 10			Ø 14	
Anchorage depth	h _{nom}	[mm]	50	70	90	50	70	90	70	90
Anchorage in concrete ≥ C12/15										
Permissible tensile load		[kN]	1,59	1,98		1,98	2,58		3,37	
Permissible shear load	Zinc-plated steel	[kN]	4,23			5,98			12,40	
	Stainless steel A4	[kN]	3,93			5,98			11,63	
Minimum member thickness	h _{min}	[mm]	80	100	120	100		120	110	130
Characteristic edge distance	c _{cr,N}	[mm]	85			140			140	
Characteristic spacing	a resp. s _{cr,N}	[mm]	90	105		120			135	
Minimum spacing	s _{min}	[mm]	85			70			85	
with an edge distance	c ≥	[mm]	85			140			140	
Minimum edge distance	c _{min}	[mm]	85			70			85	
with a spacing	s ≥	[mm]	85			175			175	
Anchorage in narrow concrete members (h ≥ 40 mm) made of concrete ≥ C12/15, e.g. weather shells of triple-skin outer wall panels										
Permissible tensile load		[kN]	-			0,99	-		-	
Permissible shear load		[kN]	-			5,98	-		-	
Permissible tensile load		[kN]	-			1,39	-		-	
Permissible shear load		[kN]	-			5,98	-		-	
Anchorage in masonry										
Permissible load ³⁾ in solid brick	≥ Mz 12 a. ≥ NF	[kN]	0,57	0,71		0,57	1,14	-	0,86	
	≥ Mz 20 a. ≥ NF	[kN]	0,86	1,14		1,00	1,14	-	1,14	
Permissible load ³⁾ in solid sand-lime brick	≥ KS 10 a. ≥ NF	[kN]	0,57			0,57	0,71	-	0,86	
	≥ KS 20 a. ≥ NF	[kN]	0,71	0,86		1,00		-	1,29	
Permissible load ³⁾ in lightweight concrete block	≥ V 2; ρ ≥ 1,2 kg/dm ³	[kN]	0,11	0,26		0,11		-	0,26	
	≥ V 6; ρ ≥ 1,6 kg/dm ³	[kN]	0,34	0,57		0,57	1,29	-	0,57	
Permissible load ³⁾⁵⁾ in vertically perforated brick (e.g. Poroton)	≥ HLz 10; ρ ≥ 1,0 kg/dm ³	[kN]	0,17			-	0,21	-	0,57	0,71
Permissible load ³⁾ in perforated sand-lime brick	≥ KSL 6	[kN]	-			-	0,21	-	0,26	0,34
	≥ KSL 12	[kN]	0,34	0,43		-	0,71	-	0,43	0,71
Permissible load in ³⁾⁵⁾ hollow lightweight concrete blocks	≥ HBL 2	[kN]	0,43	0,57	0,43	0,57	0,71	-	0,34	0,21
	≥ HBL 6	[kN]	0,43	0,71	0,43	0,71	0,43	-	0,57	-
Permissible load ³⁾⁵⁾ in ceilings made of vertically perforated bricks	f _b ≥ 10 N/mm ² ; ρ ≥ 0,7 kg/dm ³	[kN]	-			-	0,57	-	-	
Minimum member thickness	h _{min}	[mm]	115			110			115	
Minimum spacing (single anchor)	a _{min}	[mm]	250			250			250	
Minimum spacing (anchor group)	s _{min}	[mm]	100			100			100	
Minimum edge distance (anchor group)	c _{min}	[mm]	100			100			100	
Anchorage in aerated concrete										
Permissible load ³⁾ in aerated concrete	2 N/mm ²	[kN]	-	0,14	0,21	-	0,18	0,21	0,32	0,43
	4 N/mm ²	[kN]	-	0,32	0,43	-	0,43	0,54	0,89	1,07
	6 N/mm ²	[kN]	-	0,54	0,71	-	0,71	0,89	1,43	1,79
Minimum member thickness	h _{min}	[mm]	-	175		-	100	120	175 ⁶⁾ /300 ⁷⁾	
Minimum spacing (single anchor)	a _{min}	[mm]	-	250		-	250		250	
Minimum spacing (anchor group)	s _{min}	[mm]	-	80 ⁶⁾ / 110 ⁸⁾		-	100 ⁶⁾ / 120 ⁸⁾		80	100 ⁶⁾ /125 ⁷⁾
Minimum edge distance (anchor group)	c _{min}	[mm]	-	90 ⁶⁾ /110 ⁸⁾		-	120		120	120 ⁶⁾ /150 ⁷⁾

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 a according to table B4.1 resp. table B4.2 of the assessment.

²⁾ 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.

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

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 to assessment have to be taken.

⁵⁾ Rotary drilling.