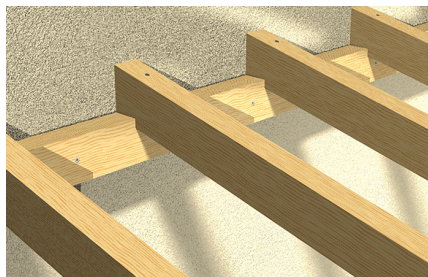


The powerful problem solver with long expansion sleeve



VERSIONS

- Zinc-plated steel
- Stainless steel

BUILDING MATERIALS

Approved for:

- Vertically perforated brick
- Aerated concrete
- Hollow blocks made from lightweight concrete
- Perforated sand-lime brick
- Thermal insulation blocks
- Solid block made from lightweight and normal weight concrete
- Solid brick
- Solid sand-lime brick
- Concrete C12/15

Also suitable for:

- Natural stone with dense structure
- Solid panel made from gypsum

ADVANTAGES

- Through the special geometry of the plug, the retention forces are evenly distributed in the drill hole.
- When the plug is to be set below the plaster, the longer ribs prevent plug rotation during installation.
- The variable anchorage depths of 70 or 90 mm offer special advantages and high loads when anchoring in aerated concrete.
- When anchoring in hollow and solid construction materials, the two expansion zones lead to optimum retention values.
- SXRL 14 is approved for the application under compression load and is thus for example useable for facade substructures that are mounted at a distance without wall brackets.
- The SXRL with effective lengths up to 290 mm provides the right plug for every application.

APPLICATIONS

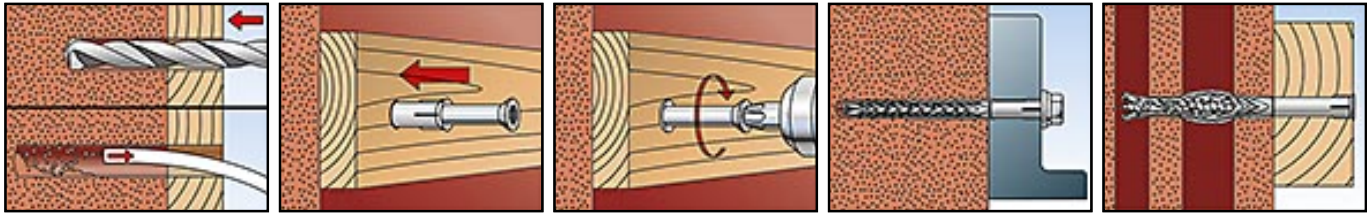
- Façade, ceiling and roof substructures made of wood and metal
- TV consoles
- Kitchen hanging cabinets
- Wardrobes
- Squared timbers
- Windows
- Gates and doors
- Facade substructures under compression load (e.g. made of aluminium without wall brackets)

APPROVALS



FUNCTIONING

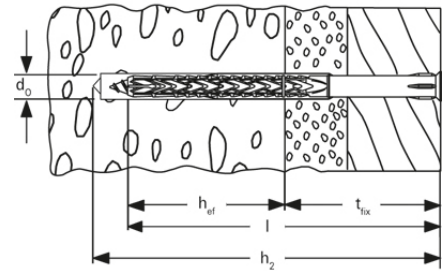
- In perforated brick masonry, the two expansion zones ensure that the introduction of force is gentle on the substrate. The porous block fillets are not crushed by the second expansion zone and therefore serve to transmit the force.
- In aircrete and solid building material, the two expansion zones combine to form one long expansion element, thus providing for a uniform and flat distribution of the load into substrate.



TECHNICAL DATA



Frame fixing SXRL-T



galvanized

Type	Art.-No.	DIBt-approval	ETA-approval	Drill diameter d_0 [mm]	Anchor length l [mm]	Min. drill hole depth for through fixings h_2 [mm]	Usable length at anchorage depth 70mm t_{fix} [mm]	Usable length at anchorage depth 90mm t_{fix} [mm]
SXRL 10 x 80 T	522698		■	10	80	90	10	
SXRL 10 x 100 T	522699		■	10	100	110	30	10

LOADS

Frame fixing SXRL 10⁴⁾

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.

					Solid brick masonry and perforated brick masonry		
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]	permissible load F _{perm} ^{3) 5)} [kN]	min. spacing s _{min} ²⁾ [mm]	min. edge distance c _{min} ²⁾ [mm]
Solid brick Mz							
SXRL 10	≥ 20	Mz	70	110	1,14	100	100
SXRL 10	≥ 28	Mz	70	110	1,57	100	100
Solid sand-lime brick and solid block KS							
SXRL 10	≥ 12	KS	70	110	1,86	100	100
Vertically perforated brick HLz							
SXRL 10	≥ 20	HLz	70	110	0,34	100	100
Perforated sand-lime brick KSL							
SXRL 10	≥ 20	KSL	70	110	1,00	100	100
Hollow block of lightweight aggregate concrete Hbl							
SXRL10	≥ 6	Hbl	70	110	0,43 ⁷⁾	100	100
SXRL10	≥ 10	Hbl	70	110	0,71 ⁷⁾	100	100
Solid brick and solid block of lightweight aggregate concrete V							
SXRL 10	≥ 2	V	70	100	0,34	100	100
Aerated concrete blocks and reinforced panels AAC							
SXRL 10	≥ 2	AAC	90	175	0,32	200	100
SXRL 10	≥ 6	AAC	90	175	1,43	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 an 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 zinc 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). The given loads are reference values which may change due to type of brick and manufacturer. If the embedment depth is higher than $h_{nom} = 70$ 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 long term temperatures up to 30°C higher permissible loads may be possible.
Thickness of outer web min. 35mm and hammer drilling.

LOADS

Frame fixing SXRL 10⁴⁾

Highest permissible loads^{1) 6)} for a single anchor for multiple fixings of non-structural applications in normal concrete ≥ C12/15 resp. ≥ 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]
SXRL 10	70	110	2,6	2,6 ⁵⁾	50	50

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 ≥ 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. It amounts $V_{zul} = 6,0$. Due to that the expected displacements will disable the proper function of the fixture a maximum shear load on the basis of 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.