

## 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

### APPROVALS



### ADVANTAGES

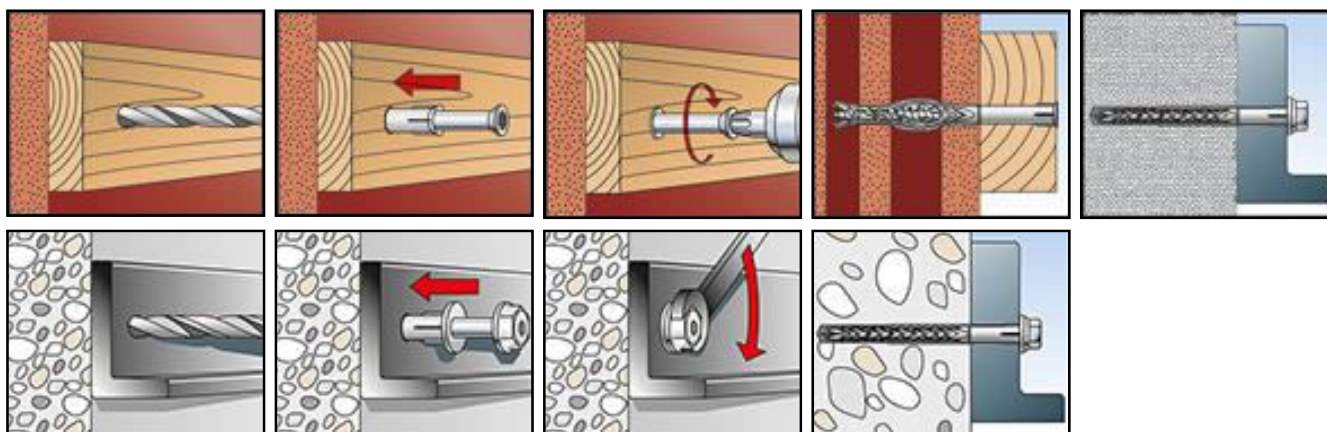
- Through the special geometry of the plug, the retention forces are evenly distributed in the drill hole.
- When the plug is to be set below the plaster, the longer ribs prevent plug rotation during installation.
- The variable anchorage depths of 70 or 90 mm offer special advantages and high loads when anchoring in aerated concrete.
- When anchoring in hollow and solid construction materials, the two expansion zones lead to optimum retention values.
- 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 cabinets
- Wardrobes
- Squared timbers
- Windows
- Doors and gates

### FUNCTIONING

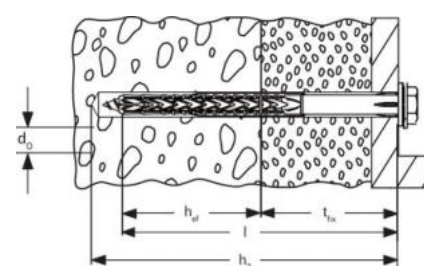
- In perforated brick masonry, the two expansion zones ensure that the introduction of force is gentle on the substrate. The porous block fillets are not crushed by the second expansion zone and therefore serve to transmit the force.
- In aircrete and solid building material, the two expansion zones 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-FUS



galvanized

Article name	Art.-No.	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]	Usable length at anchorage depth 70mm [mm]	Usable length at surface-flush installation [mm]
SXRL 10 x 80 FUS	522719	■	10	80	90	10			
SXRL 10 x 100 FUS	522720	■	10	100	110	30	10		
SXRL 10 x 120 FUS	522721	■	10	120	130	50	30		
SXRL 10 x 140 FUS	522723	■	10	140	150	70	50		
SXRL 10 x 160 FUS	522724	■	10	160	170	90	70		
SXRL 10 x 180 FUS	522725	■	10	180	190	110	90		
SXRL 10 x 200 FUS	522726	■	10	200	210	130	110		
SXRL 10 x 230 FUS	522727	■	10	230	240	160	140		
SXRL 10 x 260 FUS	522728	■	10	260	270	190	170		
SXRL 10 x 290 FUS	522729	■	10	290	300	220	200		

A4

Article name	Art.-No.	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]	Usable length at anchorage depth 70mm [mm]	Usable length at surface-flush installation [mm]
SXRL 10 x 80 FUS A4	522730	■	10	80	90	10			
SXRL 10 x 100 FUS A4	522731	■	10	100	110	30	10		
SXRL 10 x 120 FUS A4	522732	■	10	120	130	50	30		
SXRL 10 x 140 FUS A4	522733	■	10	140	150	70	50		
SXRL 10 x 160 FUS A4	522734	■	10	160	170	90	70		
SXRL 10 x 180 FUS A4	522735	■	10	180	190	110	90		
SXRL 10 x 200 FUS A4	522736	■	10	200	210	130	110		
SXRL 10 x 230 FUS A4	522737	■	10	230	240	160	140		
SXRL 10 x 260 FUS A4	522738	■	10	260	270	190	170		
SXRL 10 x 290 FUS A4	522739	■	10	290	300	220	200		

## LOADS

### Frame fixing SXRL<sup>4)</sup>

Highest permissible loads<sup>1)</sup> 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 <sub>b</sub>  [N/mm²]	brick type, naming acc. DIN  [-]  [-]	min. anchorage depth  h <sub>nom</sub>  [mm]	min. member thickness  h <sub>min</sub>  [mm]	permissible load  F <sub>perm</sub> <sup>3) 5)</sup>  [kN]	min. spacing  s <sub>min</sub> <sup>2)</sup>  [mm]	min. edge distance  c <sub>min</sub> <sup>2)</sup>  [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	HLz	70	110	1,00	100	100
Hollow block of lightweight aggregate concrete Hbl							
SXRL10	≥ 6	Hbl	70	110	0,43 <sup>7)</sup>	100	100
SXRL10	≥ 10	Hbl	70	110	0,71 <sup>7)</sup>	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

<sup>1)</sup> 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.

<sup>2)</sup> 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.

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

<sup>4)</sup> 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.

<sup>5)</sup> 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.

<sup>6)</sup> 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.