

Frame fixing SXR

Permissible loads¹⁾²⁾³⁾ of a single anchor as part of a multiple fixing of non-structural systems.
For the design the complete current assessment ETA-07/0121 has to be considered.

Type			SXR 8	SXR 10
Anchor diameter		[mm]	8	10
Anchorage depth	h_{nom}	[mm]	50	50
Anchorage in concrete \geq C12/15				
Permissible tensile load N_{perm}		[kN]	0.99	1.79
Permissible shear load V_{perm}	zinc coated screws (gvz)	[kN]	4.23	5.98
	stainless steel screw (R)	[kN]	3.93	5.98
Minimum member thickness	h_{min}	[mm]	100	100
Characteristic edge distance	$c_{cr,N}$	[mm]	70	140
Characteristic spacing	a resp. $s_{cr,N}$	[mm]	70	100
Minimum spacing	s_{min}	[mm]	70	70
with an edge distance	$c \geq$	[mm]	70	210
Minimum edge distance	c_{min}	[mm]	70	85
with a spacing	$s \geq$	[mm]	70	100
Anchorage in narrow concrete members ($h \geq 40$ mm) made of concrete \geq C12/15, e.g. weather shells of triple-skin outer wall panels				
Permissible tensile load N_{perm}		[kN]	–	1.19
Permissible shear load V_{perm}		[kN]	–	5.98
Anchorage in masonry				
Permissible load ⁴⁾ F_{perm} in solid brick	\geq Mz 12/1.8; \geq NF	[kN]	0.57	0.57
	\geq Mz 20/1.8; \geq NF	[kN]	0.71	0.86
Permissible load ⁴⁾ F_{perm} in solid sand-lime brick	\geq KS 10/1.8; \geq NF	[kN]	0.57	0.57
	\geq KS 20/1.8; \geq NF	[kN]	0.71	0.71
Permissible load ⁴⁾ F_{perm} in lightweight concrete block	\geq Vbl 2; $\rho \geq 1.2$ kg/dm ³	[kN]	0.26	0.21
	\geq Vbl 6; $\rho \geq 1.6$ kg/dm ³	[kN]	0.26	0.71
Permissible load ⁴⁾⁵⁾ F_{perm} in vertically perforated brick	\geq HLZ 12; $\rho \geq 1.0$ kg/dm ³	[kN]	0.17	0.26
Permissible load ⁴⁾ F_{perm} in perforated sand-lime brick	\geq KSL 8; $\rho \geq 1.4$ kg/dm ³	[kN]	0.26	0.43
	\geq KSL 12; $\rho \geq 1.4$ kg/dm ³	[kN]	0.57	0.57
Permissible load ⁴⁾⁵⁾ F_{perm} in hollow lightweight concrete blocks	\geq Hbl 2; $\rho \geq 0.7$ kg/dm ³	[kN]	–	0.43
	\geq Hbl 6; $\rho \geq 1.2$ kg/dm ³	[kN]	0.43	0.57
Minimum member thickness	h_{min}	[mm]	100	100
Minimum spacing (single anchor)	a_{min}	[mm]	250	250
Minimum spacing (anchor group)	s_{min}	[mm]	100	100
Minimum edge distance (anchor group)	c_{min}	[mm]	100	100
Anchorage in aerated concrete				
Permissible load ⁴⁾ F_{zul} in aerated concrete	AAC ≥ 2 N/mm ²	[kN]	–	0.14 ⁶⁾
	AAC ≥ 4 N/mm ²	[kN]	–	0.27
	AAC ≥ 6 N/mm ²	[kN]	–	0.27
Minimum member thickness	h_{min}	[mm]	–	100
Minimum spacing (single anchor)	a_{min}	[mm]	–	250
Minimum spacing (anchor group)	s_{min}	[mm]	–	400
Minimum edge distance (anchor group)	c_{min}	[mm]	–	100

¹⁾ Valid for zinc coated screws (gvz) and for screws made of stainless steel (R). For exterior use of the zinc coated screws measures against incoming humidity according to assessment have to be taken.

²⁾ 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 according to assessment.

³⁾ Valid for temperatures in the substrate up to +50 °C (resp. short term up to +80 °C).

⁴⁾ Valid for tensile load, shear load and oblique load under any angle. For combinations of tensile loads, shear loads and bending moments see assessment.

⁵⁾ Rotary drilling.

⁶⁾ Drill holes to be made with aerated concrete hole punch.