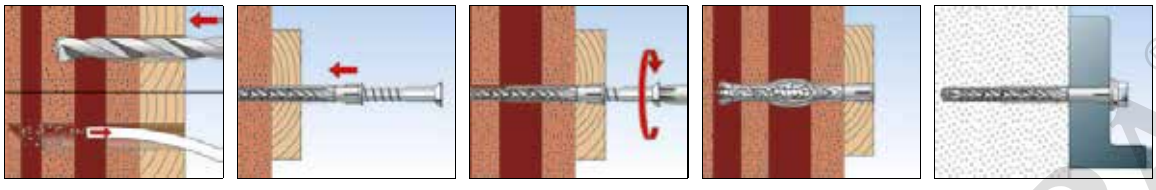
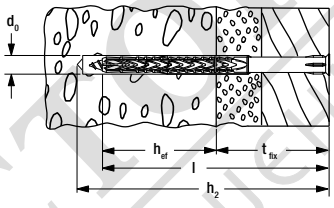
Frame fixing SXRL

INSTALLATION



TECHNICAL DATA

SXRL-T - with fischer countersunk head safety screw

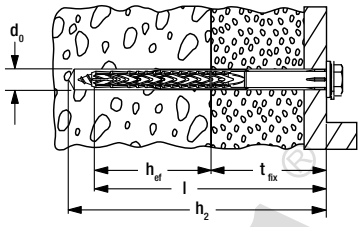


	zinc-plated steel	stainless steel	Approval		Drill diameter	Min. drill hole depth for through fixings	Usable length at anchorage depth 50mm	Usable length at anchorage depth 70mm	Usable length at anchorage depth 90mm	Anchor length	Drive	Sales unit
	Art.-No.	Art.-No.	ETA	DIBt	d_0 [mm]	h_2 [mm]	t_{fix} [mm]	t_{fix} [mm]	t_{fix} [mm]	l [mm]		[pcs]
Item	gvz	A4										
SXRL 8 x 60 T	540113	540119	■	–	8	70	10	–	–	60	T30	50
SXRL 8 x 80 T	540114	540121	■	–	8	90	30	10	–	80	T30	50
SXRL 8 x 100 T	540115	540123	■	–	8	110	50	30	10	100	T30	50
SXRL 8 x 120 T	540116	540124	■	–	8	130	70	50	30	120	T30	50
SXRL 8 x 140 T	540117	540125	■	–	8	150	90	70	50	140	T30	50
SXRL 8 x 160 T	540118	540126	■	–	8	170	110	90	70	160	T30	50
SXRL 10 x 80 T	522698	522709	■	–	10	90	30	10	–	80	T40	50
SXRL 10 x 100 T	522699	522710	■	–	10	110	50	30	10	100	T40	50
SXRL 10 x 120 T	522700	522711	■	–	10	130	70	50	30	120	T40	50
SXRL 10 x 140 T	522701	522712	■	–	10	150	90	70	50	140	T40	50
SXRL 10 x 160 T	522703	522713	■	–	10	170	110	90	70	160	T40	50
SXRL 10 x 180 T	522704	522714	■	–	10	190	130	110	90	180	T40	50
SXRL 10 x 200 T	522705	522715	■	–	10	210	150	130	110	200	T40	50
SXRL 10 x 230 T	522706	522716	■	–	10	240	180	160	140	230	T40	50
SXRL 10 x 260 T	522707 1)	522717 1)	■	–	10	270	210	190	170	260	T40	50
SXRL 10 x 290 T	522708 1)	522718 1)	■	–	10	300	240	220	200	290	T40	50
SXRL 14 x 80 T	530920	530932	■	●	14	95	–	10	–	80	T50	50
SXRL 14 x 100 T	530921	530933	■	●	14	115	–	30	10	100	T50	50
SXRL 14 x 120 T	530922	530934	■	●	14	135	–	50	30	120	T50	50
SXRL 14 x 140 T	530923	530935	■	●	14	155	–	70	50	140	T50	50
SXRL 14 x 160 T	530924	530936	■	●	14	175	–	90	70	160	T50	50
SXRL 14 x 180 T	530925	530937	■	●	14	195	–	110	90	180	T50	50
SXRL 14 x 200 T	530926	530938	■	●	14	215	–	130	110	200	T50	50
SXRL 14 x 230 T	530927	530939	■	●	14	245	–	160	140	230	T50	50
SXRL 14 x 260 T	530928	530940	■	●	14	275	–	190	170	260	T50	50
SXRL 14 x 300 T	530929 1)	530941 1)	■	●	14	315	–	230	210	300	T50	20
SXRL 14 x 330 T	530930 1)	530942 1)	■	●	14	345	–	260	240	330	T50	20
SXRL 14 x 360 T	530931 1)	530943 1)	■	●	14	375	–	290	270	360	T50	20

1) not pre-assembled

TECHNICAL DATA

SXRL-FUS - with fischer hexagon head safety screw, moulded washer and integrated bit recess

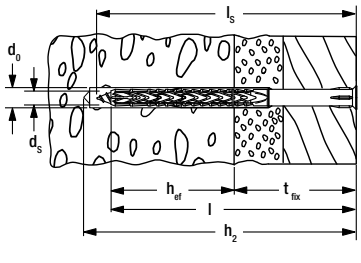


	zinc-plated steel	stainless steel	Approval		Drill diameter	Min. drill hole depth for through fixings	Usable length at anchorage depth 50mm	Usable length at anchorage depth 70mm	Usable length at anchorage depth 90mm	Anchor length	Drive	Sales unit
	Art.-No.	Art.-No.	ETA	DIBt	d_0 [mm]	h_2 [mm]	t_{fix} [mm]	t_{fix} [mm]	t_{fix} [mm]	l [mm]		[pcs]
Item	**gvz**	**A4**										
SXRL 8 x 60 FUS	**540127**	**540135**	■	–	8	70	10	–	–	60	T30/SW10	50
SXRL 8 x 80 FUS	**540129**	**540136**	■	–	8	90	30	10	–	80	T30/SW10	50
SXRL 8 x 100 FUS	**540130**	**540137**	■	–	8	110	50	30	10	100	T30/SW10	50
SXRL 8 x 120 FUS	**540131**	–	■	–	8	130	70	50	30	120	T30/SW10	50
SXRL 8 x 140 FUS	**540133**	–	■	–	8	150	90	70	50	140	T30/SW10	50
SXRL 8 x 160 FUS	**540134**	–	■	–	8	170	110	90	70	160	T30/SW10	50
SXRL 10 x 80 FUS	**522719**	**522730**	■	–	10	90	30	10	–	80	T40/SW13	50
SXRL 10 x 100 FUS	**522720**	**522731**	■	–	10	110	50	30	10	100	T40/SW13	50
SXRL 10 x 120 FUS	**522721**	**522732**	■	–	10	130	70	50	30	120	T40/SW13	50
SXRL 10 x 140 FUS	**522723**	**522733**	■	–	10	150	90	70	50	140	T40/SW13	50
SXRL 10 x 160 FUS	**522724**	**522734**	■	–	10	170	110	90	70	160	T40/SW13	50
SXRL 10 x 180 FUS	**522725**	**522735**	■	–	10	190	130	110	90	180	T40/SW13	50
SXRL 10 x 200 FUS	**522726**	**522736**	■	–	10	210	150	130	110	200	T40/SW13	50
SXRL 10 x 230 FUS	**522727**	**522737**	■	–	10	240	180	160	140	230	T40/SW13	50
SXRL 10 x 260 FUS	**522728** 1)	**522738** 1)	■	–	10	270	210	190	170	260	T40/SW13	50
SXRL 10 x 290 FUS	**522729** 1)	**522739** 1)	■	–	10	300	240	220	200	290	T40/SW13	50
SXRL 14 x 80 FUS	**530946**	**530955**	■	●	14	95	–	10	–	80	T50/SW17	50
SXRL 14 x 100 FUS	**530947**	**530956**	■	●	14	115	–	30	10	100	T50/SW17	50
SXRL 14 x 120 FUS	**530948**	**530957**	■	●	14	135	–	50	30	120	T50/SW17	50
SXRL 14 x 140 FUS	**530949**	**530958**	■	●	14	155	–	70	50	140	T50/SW17	50
SXRL 14 x 160 FUS	**530950**	**530959**	■	●	14	175	–	90	70	160	T50/SW17	50
SXRL 14 x 180 FUS	**530951**	**530960**	■	●	14	195	–	110	90	180	T50/SW17	50
SXRL 14 x 200 FUS	**530952**	**530961**	■	●	14	215	–	130	110	200	T50/SW17	50
SXRL 14 x 230 FUS	**530953**	**530962**	■	●	14	245	–	160	140	230	T50/SW17	50
SXRL 14 x 260 FUS	**530954**	**530963**	■	●	14	275	–	190	170	260	T50/SW17	50

1) not pre-assembled

ACCESSORIES

SXRL - without screw



Item	Art.-No.	Drill diameter d_0 [mm]	Min. drill hole depth for through fixings h_2 [mm]	Usable length at anchorage depth 50mm t_{fix} [mm]	Usable length at anchorage depth 70mm t_{fix} [mm]	Usable length at anchorage depth 90mm t_{fix} [mm]	Anchor length l [mm]	Screw diameter d_s [mm]	Min. screw length l_s [mm]	Sales unit [pcs]
SXRL 8 x 60	**540879**	8	70	10	–	–	60	5,5 - 6,0	65	100
SXRL 8 x 80	**540880**	8	90	30	10	–	80	5,5 - 6,0	85	100
SXRL 8 x 100	**540881**	8	110	50	30	10	100	5,5 - 6,0	105	100
SXRL 8 x 120	**540882**	8	130	70	50	30	120	5,5 - 6,0	125	100

Frame fixing SXRL

ACCESSORIES

Cover cap **ADT**

Item	Art.-No.	Colour	Cap [Ø mm]	Match	Sales unit [pcs]
ADT 15 W	**060326**	white	15	Safety screw with integrated bit recess T40	100
ADT 15 DB	**060329**	dark brown	15	Safety screw with integrated bit recess T40	100
ADT 18 W	**060334**	white	18	Safety screw with integrated bit recess T40	100
ADT 18 DB	**060337**	dark brown	18	Safety screw with integrated bit recess T40	100

ACCESSORIES

Washer **U**

Item	Art.-No.	External-Ø d [mm]	Hole-Ø D [mm]	Thickness S [mm]	Matching anchor type	Sales unit [pcs]
U 11,5 x 21 x 1,5 DIN 522 A2	**010026**	21	11.5	1.5	SXR 10, SXRL 10, FUR 10, SXS 10	500

LOADS

Frame fixing SXRL[3]

Highest recommended loads[1] 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_{nom}	[mm]	50	70	90
Screw diameter	Ø	[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	≥ C20/25	[kN]	0,60	1,00	1,00
Solid brick	≥ Mz 12	[kN]	0,45	0,60	0,60
Solid sand-lime brick	≥ KS 12	[kN]	0,40	0,50	0,50
Vertically perforated brick	≥ Hlz 12 (ρ ≥ 1,0 kg/dm³)	[kN]	0,15	0,15	0,15
Perforated sand-lime brick	≥ 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 SXRL[4)]

Highest permissible loads[1)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	-		-		
Anchorage in pre-stressed hollow-core concrete slabs (mirror thickness d_b ≥ 30 mm) made of concrete ≥ C45/55											
Permissible tensile load		[kN]	-			1,39	-		-		
Permissible shear load		[kN]	-			5,98	-		-		
Anchorage in masonry											
Permisible 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/dm³	[kN]	0,11	0,26		0,11		-	0,26		
	≥ V 6; ρ ≥ 1,6 kg/dm³	[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/dm³	[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/mm²; ρ ≥ 0,7 kg/dm³	[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/mm²	[kN]	-	0,14	0,21	-	0,18	0,21	0,32	0,43	
	4 N/mm²	[kN]	-	0,32	0,43	-	0,43	0,54	0,89	1,07	
	6 N/mm²	[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 γ_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.

[6)] Only valid for AAC with compression strength ≥ 2 to < 4 N/mm².

[7)] Only valid for AAC with compression strength ≥ 4 N/mm².

[8)] Only valid for AAC with compression strength ≥ 6 N/mm².