

SKR - SKS CE: screw anchor for concrete CE1

- CE option 1
- Certified use for cracked and uncracked concrete from C20/25 to C50/60 grading
- Fire resistance R120
- Self-locking knurled under-head (SKR CE)
- Electrogalvanized carbon steel
- Through fastener
- No fastener expansion

SKR CE
hexagonal head with mock washer



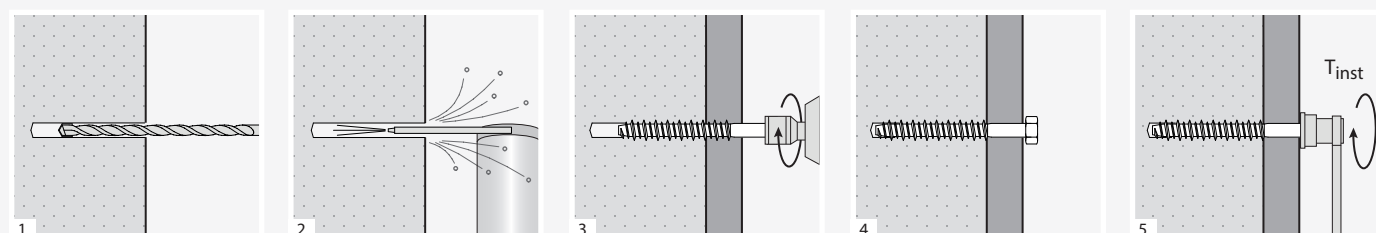
code	d ₁ [mm]	L [mm]	t _{fix} [mm]	h _{1,min} [mm]	h _{nom} [mm]	d _{0 cls} [mm]	d _{f timber} [mm]	d _{f steel} [mm]	SW [mm]	T _{inst} [Nm]	pcs/box
SKR8100CE	8	100	40	75	60	6	9	9	10	20	50
SKR1080CE		80	10	85	70	8	12	12	13	50	50
SKR10100CE	10	100	30	85	70	8	12	12	13	50	25
SKR10120CE		120	50	85	70	8	12	12	13	50	25
SKR12110CE		110	30	100	80	10	14	14	15	80	25
SKR12150CE	12	150	70	100	80	10	14	14	15	80	25
SKR12210CE		210	130	100	80	10	14	14	15	80	20
SKR16130CE	16	130	20	140	110	14	18	18	21	160	10

SKS CE
countersunk flat head



code	d ₁ [mm]	L [mm]	t _{fix} [mm]	h _{1,min} [mm]	h _{nom} [mm]	d _{0 cls} [mm]	d _{f timber} [mm]	d _{f steel} [mm]	TX [mm]	T _{inst} [Nm]	pcs/box
SKS75100CE	8	100	40	75	60	6	9	-	TX30	20	50

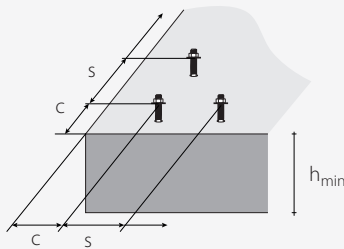
ASSEMBLY



SKR - SKS CE: screw anchor for concrete CE1



INSTALLATION



		SKR CE				SKS CE
Spacing and minimum distances		8	10	12	16	8
Minimum spacing	s_{min} [mm]	45	50	60	80	45
	for $c \geq$ [mm]	45	50	60	80	45
Minimum edge distance	c_{min} [mm]	45	50	60	80	45
	for $s \geq$ [mm]	45	50	60	80	45
Minimum thickness of the concrete support	h_{min} [mm]	100	110	130	170	100

Spacing and critical distances		8	10	12	16	8
Critical spacing	$s_{cr,N}^{(3)}$ [mm]	144	168	192	255	144
	$s_{cr,sp}^{(4)}$ [mm]	160	175	195	255	160
Critical edge distance	$c_{cr,N}^{(3)}$ [mm]	72	84	96	128	72
	$c_{cr,sp}^{(4)}$ [mm]	80	85	95	130	80

For spacing and distances smaller than the critical ones, strength values will be reduced depending on the installation parameters.

STATIC VALUES

Valid for a single anchor in C20/25 grade concrete when spacing and edge-distance are not limiting parameters.

CHARACTERISTIC VALUES

		UNCRACKED CONCRETE			
		TENSION ⁽¹⁾		SHEAR ⁽²⁾	
		$N_{Rk,p}$ [kN]	γ_{Mp}	$V_{Rk,s}$ [kN]	γ_{Ms}
SKR CE	8	16	2,1	9,4	1,5
	10	20	1,8	20,1	
	12	25	2,1	32,4	
	16	40	2,1	56,9	
SKS CE	8	16	2,1	9,4	1,5

		CRACKED CONCRETE			
		TENSION ⁽¹⁾		SHEAR ⁽²⁾	
		$N_{Rk,p}$ [kN]	γ_{Mp}	$V_{Rk,s}$ [kN]	γ_{Ms}
SKR CE	8	4	2,1	9,4	1,5
	10	7,5	1,8	20,1	
	12	9	2,1	32,4	
	16	16	2,1	56,9	
SKS CE	8	4	2,1	9,4	1,5

Increment factor for $N_{Rk,p}$		
ψ_c	C30/37	1,22
	C40/50	1,41
	C50/60	1,55

ADMISSIBLE VALUES (recommended)

		UNCRACKED CONCRETE	
		TENSION	SHEAR
		N_{rec} [kN]	V_{rec} [kN]
SKR CE	8	5,4	4,5
	10	7,9	9,6
	12	8,5	15,4
	16	13,6	27,1
SKS CE	8	5,4	4,5

		CRACKED CONCRETE	
		TENSION	SHEAR
		N_{rec} [kN]	V_{rec} [kN]
SKR CE	8	1,4	4,5
	10	3,0	9,6
	12	3,1	15,4
	16	5,4	27,1
SKS CE	8	1,4	4,5

GENERAL PRINCIPLES

- Characteristic values according to ETA and in accordance with the design method A (ETAG001).
- Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_k}{\gamma_m}$$

Coefficients γ_m are listed in the table and are in accordance with the product certificates.

- Admissible values (recommended) are evaluated based on the characteristic values by applying the material safety factors γ_m according to ETA and a further

partial factor for external actions $\gamma_f = 1,4$.

- For the calculation of anchors with reduced spacing, or too close to the edge, please refer to ETA. Similarly, in case of fastening on concrete-supports with a better-grade or limited thickness please see ETA.

NOTES

- (1) Pull-out failure mode.
- (2) Steel failure mode.
- (3) Concrete cone failure mode.
- (4) Splitting failure mode.