



SBA



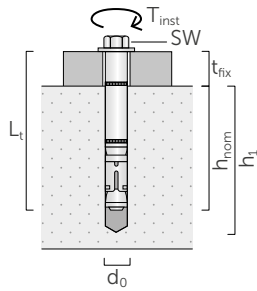
HEAVY ANCHOR WITH CE1 LOOP FASTENER SEISMIC CATEGORY C2

- CE option 1 for cracked and uncracked concrete
- Seismic performance category C1 and C2
- Electrogalvanized carbon steel
- Fire resistance R120
- 8.8 grade screw with hexagonal head and washer
- Suitable for dense materials
- Torque-controlled expansion



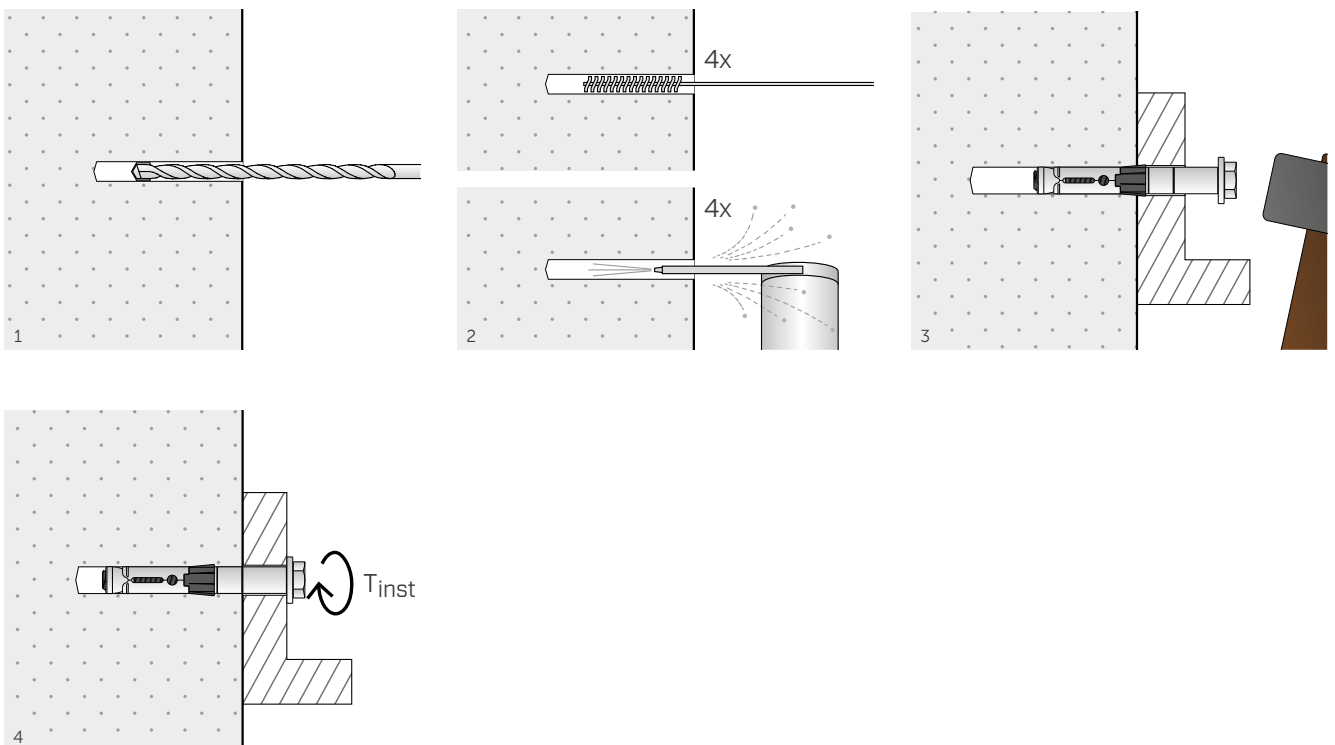
Zn
ELECTRO
PLATED

CODE	d=d ₀		L _t		t _{fix}		h ₁		h _{nom}		SW		T _{inst}		pcs
	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[Nm]	[ft lbf]	
SBA10100	10	0.394	100	4	35	1 3/8	80	3 1/8	65	2 9/16	10	3/8	15	11	50
SBA12120	12	0.473	120	4 3/4	50	1 15/16	90	3 1/2	70	2 3/4	13	1/2	30	22	25

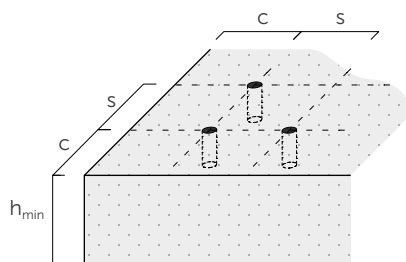


- d₀** hole diameter in the concrete support
- h_{nom}** effective anchor depth
- T_{inst}** maximum tightening torque
- L** anchor length
- t_{fix}** maximum fastening thickness
- h₁** minimum hole depth
- SW** wrench size

ASSEMBLY



INSTALLATION



Spacing and distances for tensile loads				SBA10	SBA12
Minimum spacing	s_{min}	[mm]		55	110
Minimum edge distance	c_{min}	[mm]		70	100
Minimum thickness of concrete support	h_{min}	[mm]		110	120

Spacing and critical distances				SBA10	SBA12
Effective depth	h_{ef}	[mm]		55	60
Critical spacing	$s_{cr,N}^{(1)}$	[mm]		165	180
	$s_{cr,sp}^{(2)}$	[mm]		220	320
Critical edge distance	$c_{cr,N}^{(1)}$	[mm]		85	90
	$c_{cr,sp}^{(2)}$	[mm]		110	160

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

STRUCTURAL VALUES

Valid for a single anchor in thickened C20/25 grade concrete with a thin reinforcing layer when spacing and edge-distance are not limiting parameters

CHARACTERISTIC VALUES

anchor	uncracked concrete				cracked concrete			
	tension ⁽³⁾		shear ⁽⁴⁾		tension ⁽³⁾		shear ⁽⁴⁾	
	$N_{Rk,p}$ [kN]	γ_{Mp}	$V_{Rk,s}$ [kN]	γ_{Ms}	$N_{Rk,p}$ [kN]	γ_{Mp}	$V_{Rk,s}$ [kN]	γ_{Ms} [mm]
SBA10	16	1,5	16	1,45	5	1,5	16	1,45
SBA12	16		25		6		25	

incremental factor for $N_{Rk,p}^{(5)}$		
ψ_c	C30/37	1,22
	C40/50	1,41
	C50/60	1,55

NOTES

- (1) Breakage characteristics for formation of concrete cone for tensile loads.
- (2) Splitting failure mode for tensile loads.
- (3) Pull-out failure mode.
- (4) Steel failure mode.
- (5) Tensile-strength increment factor (excluding steel failure).

GENERAL PRINCIPLES

- Characteristic values according to ETA-25/0859.
- The design values are obtained from the characteristic values as follows: $R_d = R_k/\gamma_M$.
- Coefficients γ_M are listed in the table in accordance with the failure characteristics and product certificates.
- 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, limited thickness or a thick reinforcing layer please see ETA.
- For the design of anchors subjected to seismic loading refer to ETA and to EN 1992-4:2018.
- For the calculation of anchors subjected to fire refer to the ETA and the Technical Report 020.