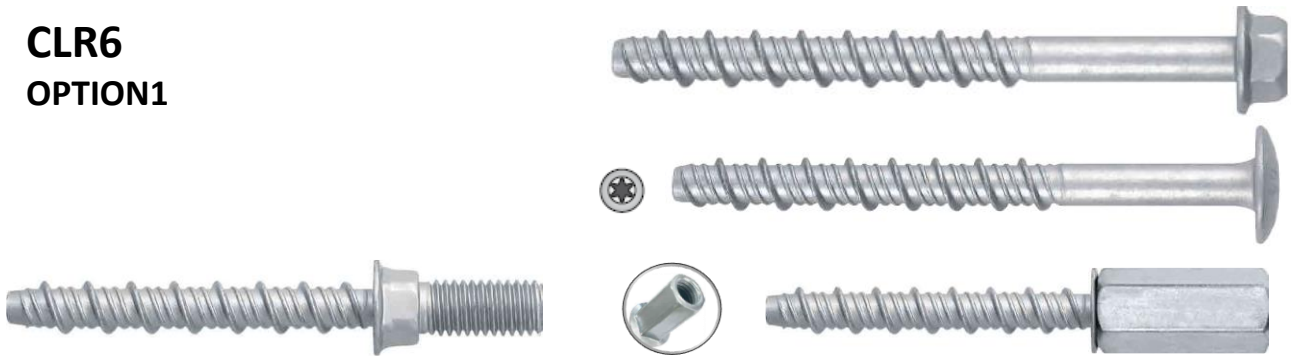


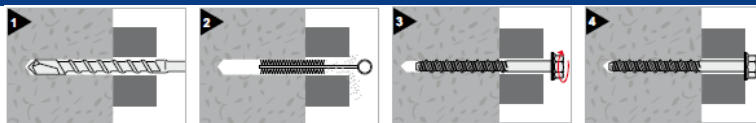
CLR6 OPTION1



PRODUCT DESCRIPTION

Carbon steel galvanized screw anchor 6 for medium or light fixing with different head configuration. The anchor screw is intended to use in cracked and non-cracked concrete (Option 1). Permanent or temporary fixing. Anchor can be unscrew and removed.

APPLICATION



LENGTH OF SCREWS

d ₀ ¹⁾	L ²⁾ [mm]	Fixture thickness [mm]	Marking	Code
		t _{fix.}		
CLR6 – H Hex head with built-in washer screw				
6	60	5	SSW 7.5x60 o LR-H 7.5x60	72009b08060
	80	25	SSW 7.5x80 o LR-H 7.5x80	72009b08080
	100	45	SSW 7.5x100 o LR-H 7.5x100	72009b08100
	120	65	SSW 7.5x120 o LR-H 7.5x120	72009b08120
CLR6 – P Pan head screw				
6	60	5	SST 7.5x60 o LR-P 7.5x60	72006b08060
	75	20	SST 7.5x75 o LR-P 7.5x75	72006b08075
CLR6 – E Special head screw with metric thread				
6	55	M8	o	72007b08055
CLR6 – I Special head screw with M8/M10 thread hex connecting nut				
6	55	M8-M10	o	72008b08055

¹⁾ Drill hole diameter; ²⁾ Screw length.

EUROPEAN TECHNICAL ASSESSMENT ETA-19/0343

CHARACTERISTIC LOADS acc. to ETA-19/0343 - EAD 330232-00-0601

Design method acc. to EN 1992-4:2018

ESSENTIAL CHARACTERISTICS		PERFORMANCE
Installation parameters		
d_0	Nominal diameter of drill bit [mm]	6
h_{nom}	Minimum installation depth [mm]	55
h_{ef}	Effective anchorage depth [mm]	42
h_{min}	Minimum thickness of the concrete member [mm]	100
s_{min}	Minimum spacing [mm]	45
c_{min}	Minimum Edge distance [mm]	45
Tension Steel failure		
$N_{Rk,s}$	Tension Steel characteristic failure [kN]	18,7
$\gamma_{m,sN}^{(1)}$	Partial safety factor for tension steel failure [-]	1,5
Pull-out failure		
$N_{Rk,p,cr}$	Tension characteristic load in cracked concrete C20/25 [kN]	6,0
$N_{Rk,p,ucr}$	Tension characteristic load in un-cracked concrete C20/25 [kN]	9,0
γ_{inst}	Partial safety factor [-]	1,2
$\gamma_{m,p}^{(1)}$	Partial safety factor [-]	1,8
$\Psi_{c\ C30/37}$	Increasing factor for concrete C30/37 [-]	1,22
$\Psi_{c\ C40/50}$	Increasing factor for concrete C40/50 [-]	1,41
$\Psi_{c\ C50/60}$	Increasing factor for concrete C50/60 [-]	1,58
Concrete Cone and Splitting failure		
h_{ef}	Effective anchorage depth [mm]	42
$s_{cr,N}$	Critical spacing [mm]	126
$c_{cr,N}$	Critical edge distance [mm]	63
$s_{cr,sp}$	Critical spacing (splitting) [mm]	126
$c_{cr,sp}$	Critical edge distance (splitting) [mm]	63
Displacement on Tension Load		
N_{cr}	Service tension load in cracked concrete C20/25 [kN]	2,4
$\delta_{NO,cr}$	Short term displacement under tension load [mm]	0,6
$\delta_{N\infty,cr}$	Long term displacement under tension load [mm]	1,4
N_{ucr}	Service tension load in un-cracked concrete C20/25 [kN]	3,6
$\delta_{NO,ucr}$	Short term displacement under tension load [mm]	0,4
$\delta_{N\infty,ucr}$	Long term displacement under tension load [mm]	1,0
Shear Steel failure		
h_{nom}	Minimum installation depth [mm]	55
$V_{Rk,s}$	Shear Steel characteristic failure [kN]	7,5
$M^0_{Rk,s}$	Bending Moment characteristic failure [Nm]	15,2
$\gamma_{m,sV}^{(1)}$	Partial safety factor for shear steel failure [-]	1,25
Shear Concrete Pry-out failure		
K_8	Factor acc. to EN 1992-4 § 7.2.2.4 [-]	1
Shear Concrete Edge failure		
l_{ef}	Effective anchorage length [mm]	42
d_{nom}	Nominal diameter of anchor [mm]	7,5
$\gamma_{mc}^{(1)}$	Partial safety factor [-]	1,5

Displacement on Shear Load		
V	Service shear load in concrete	[kN] 3,0
δ_{V0}	Short term displacement under shear load	[mm] 1,3
$\delta_{V\infty}$	Long term displacement under shear load	[mm] 2,0

FIRE RESISTANCE acc. to ETA-19/0343 Design method acc. to EN 1992-4:2018		
ESSENTIAL CHARACTERISTIC		PERFORMANCE
Tension steel failure		
h_{nom}	Minimum installation depth [mm]	55
$N_{Rk,s,fi,R30}$	Characteristic Tension Resistance = 30 min. [kN]	0,23
$N_{Rk,s,fi,R60}$	Characteristic Tension Resistance = 60 min. [kN]	0,21
$N_{Rk,s,fi,R90}$	Characteristic Tension Resistance = 90 min. [kN]	0,16
$N_{Rk,s,fi,R120}$	Characteristic Tension Resistance = 120 min. [kN]	0,12
$S_{cr,N,fi}$	Critical spacing under fire exposure [mm]	168
$C_{cr,N,fi}$	Critical edge distance under fire exposure [mm]	84
$\gamma_{M,fi}^{1)}$	Partial safety factor under fire exposure [-]	1
Shear steel failure without lever arm		
h_{nom}	Minimum installation depth [mm]	55
$V_{Rk,s,fi,R30}$	Characteristic Shear Resistance = 30 min. [kN]	0,23
$V_{Rk,s,fi,R60}$	Characteristic Shear Resistance = 60 min. [kN]	0,21
$V_{Rk,s,fi,R90}$	Characteristic Shear Resistance = 90 min. [kN]	0,16
$V_{Rk,s,fi,R120}$	Characteristic Shear Resistance = 120 min. [kN]	0,12
Shear steel failure with lever arm		
$M^0_{Rk,s,fi,R30}$	Characteristic Bending Moment = 30 min. [Nm]	0,19
$M^0_{Rk,s,fi,R60}$	Characteristic Bending Moment = 60 min. [Nm]	0,17
$M^0_{Rk,s,fi,R90}$	Characteristic Bending Moment = 90 min. [Nm]	0,13
$M^0_{Rk,s,fi,R120}$	Characteristic Bending Moment = 120 min. [Nm]	0,10
Shear concrete pry-out failure		
k	Factor acc. to. EN 1992-4 [-]	1,0
Shear concrete edge failure		
The characteristic resistance $V^0_{Rk,c,fi}$ in C20/25 to C50/60 concrete is determined by: $V^0_{Rk,c,fi} = 0,25 \times V^0_{Rk,c} (\leq R90)$ and $V^0_{Rk,c,fi} = 0,20 \times V^0_{Rk,c} (R120)$ with $V^0_{Rk,c}$ initial value of the characteristic resistance in cracked concrete C20/25 under normal temperature acc. to EN 1992-4		

¹⁾ In absence of other national regulations.

INNE CECHY UŻYTKOWE

Type	Concrete screw
Material	Carbon steel cold formed
Durability	Internal dry conditions
Anticorrosion protection	Zinc coating > 5µm ISO 4042



DOP/DWU



Fire resistance
R120

