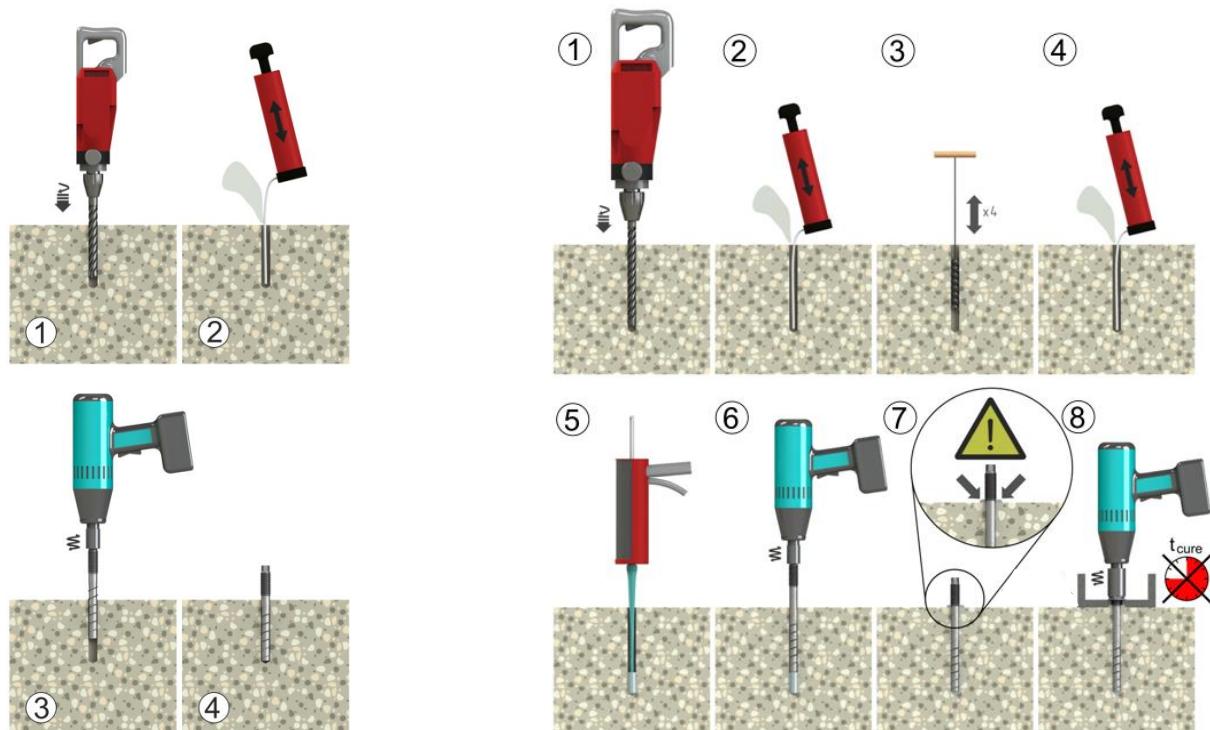
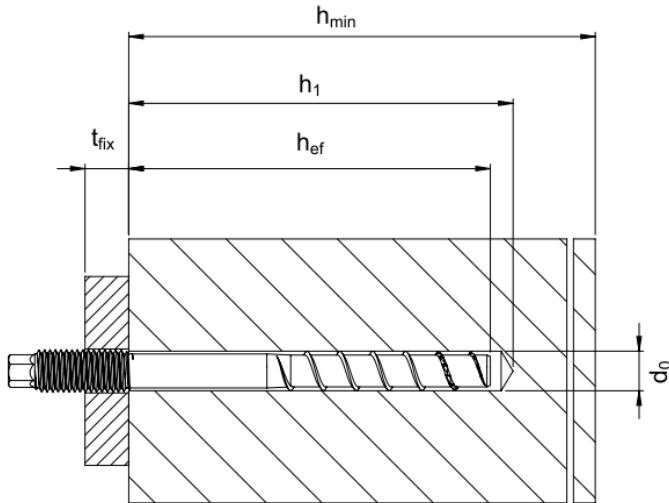




## Technical data

### Toge concrete screw TSM 14x165 M 16x35 SW 12



Installation instruction without  
chemical component

Installation instruction with chemical component



## technical characteristics without fire exposure

			TSM 14 x 165	
			without chemical component	with chemical component
drill bit diameter	$d_0$	[mm]	14	14
depth of drill hole	$h_1$	[mm]	135	125
embedment depth of anchor	$h_{\text{nom}}$	[mm]	125	125
effective anchorage depth	$h_{\text{ef}}$	[mm]	125	125
minimum thickness of member	$h_{\text{min}}$	[mm]	200	195
minimum edge distance	$c_{\text{min}}$	[mm]	100	60
minimum spacing	$s_{\text{min}}$	[mm]	100	60
characteristic edge distance	$c_{\text{cr,N}}$	[mm]	1,5 x $h_{\text{ef}}$	
characteristic spacing	$s_{\text{cr,N}}$	[mm]	3 x $h_{\text{ef}}$	
installation torque	$T_{\text{inst}}$	[Nm]	80	
permissible tension load in non-cracked concrete C 20/25 <sup>1) 2)</sup>	$N_{\text{per}}$	[kN]	23,9	28,3
permissible tension load in cracked concrete C 20/25 <sup>1) 2)</sup>	$N_{\text{per}}$	[kN]	17,1	28,3
permissible shear load in cracked and non cracked concrete C 20/25 to C 50/60 <sup>1) 2)</sup>	$V_{\text{per}}$	[kN]	30,5	30,5

- 1) The partial safety factor for material resistance  $\gamma_M = 1.5$  as well the partial safety factor for load actions  $\gamma_F = 1,4$  are considered.
- 2) The value applies without influence of spacing and edge distance.