

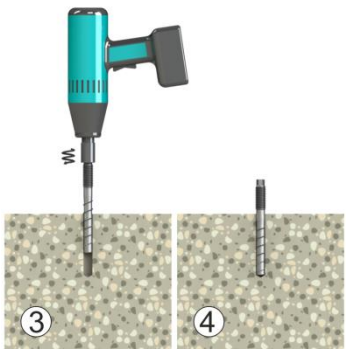
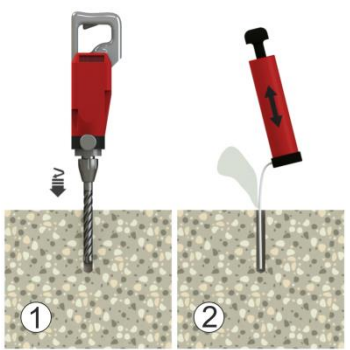
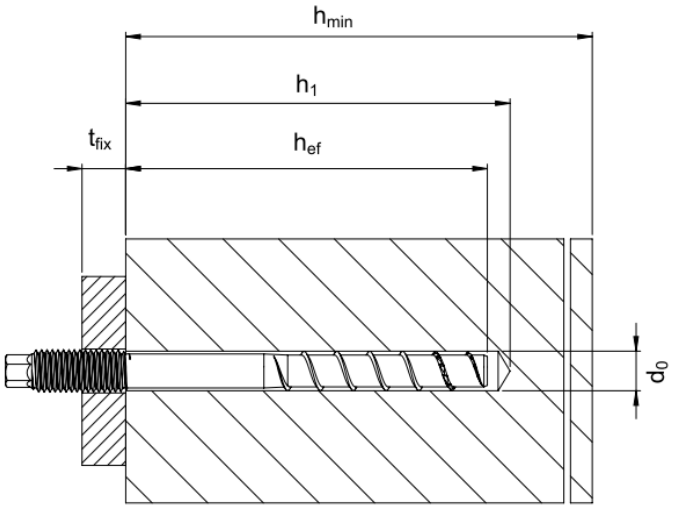


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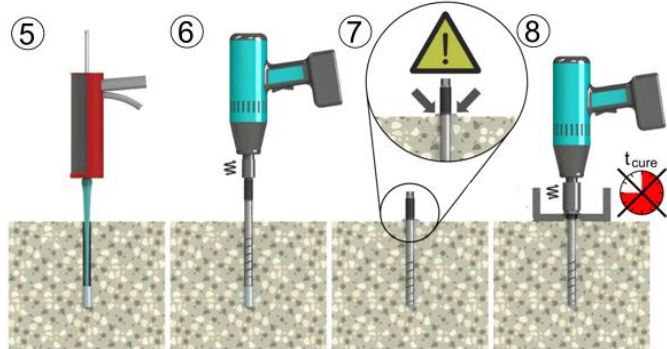
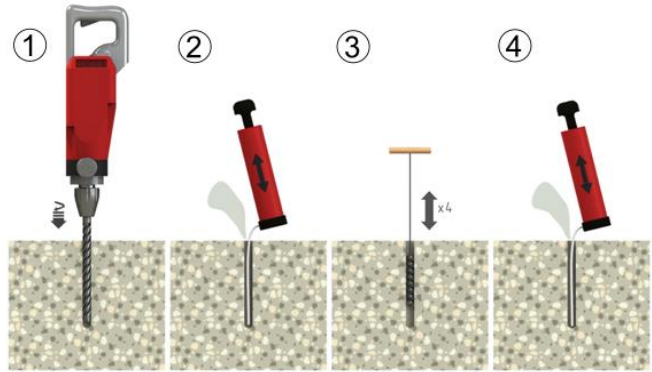


### Technical data

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



Installation instruction without chemical component



Installation instruction with chemical component



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### technical characteristics without fire exposure

			TSM 14 x 100	
			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	$h_{nom}$	[mm]	125	125
effective anchorage depth	$h_{ef}$	[mm]	125	125
minimum thickness of member	$h_{min}$	[mm]	200	195
minimum edge distance	$c_{min}$	[mm]	100	60
minimum spacing	$s_{min}$	[mm]	100	60
characteristic edge distance	$c_{cr,N}$	[mm]	1,5 x $h_{ef}$	
characteristic spacing	$s_{cr,N}$	[mm]	3 x $h_{ef}$	
installation torque	$T_{inst}$	[Nm]	80	
permissible tension load in non-cracked concrete C 20/25 <sup>1) 2)</sup>	$N_{per}$	[kN]	23,9	28,3
permissible tension load in cracked concrete C 20/25 <sup>1) 2)</sup>	$N_{per}$	[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>	$V_{per}$	[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.