

TOGE TSM BC ST

Concrete screw for construction site safety and temporary fixation



Fast and safe installation

The optimized thread enables a fast and safe installation process.

High loads

High load bearing capacity in cracked and non-cracked concrete.

Special approval

Anchoring of site equipment in fresh concrete.

Temporary fastening

For temporary fastening also in outdoor areas.

Easily demountable

Residual disassembly and therefore reusable.

Approval

Approval

General design approval Z-21.8.2115 for temporary fastening.

Base Materials

Application in concrete with a compressive strength of $\geq 10 \text{ N/mm}^2$.

Cracked and non-cracked concrete.

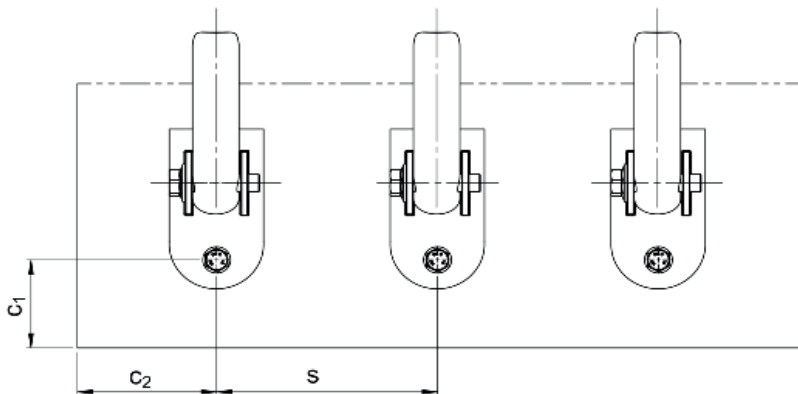


Without fire exposure, Steel

Screw size TSM BC ST & TSM High Performance			TSM 10	TSM 12		TSM 14		
Embedment depth	h _{nom}	[mm]	h _{nom,1}	h _{nom,1}	h _{nom,2}	h _{nom,1}	h _{nom,2}	h _{nom,3}
			75	75	90	75	90	115
Diameter of drill bit	d ₀	[mm]	10	12		14		
Depth of drill hole	h _{1 min}	[mm]	85	85	100	85	100	125
Minimum base material thickness	h _{min}	[mm]	150	150	195	150	195	200 225
Approved load in cracked concrete with compressive strength f _{ck,cube} 10 N/mm ^{1) 2)}	N _{zul}	[kN]	4,3	4,3	8,6	4,3	8,6	10,7 12,1
Approved load in cracked concrete with compressive strength f _{ck,cube} 15 N/mm ^{1) 2)}	N _{zul}	[kN]	5,0	5,0	9,3	5,0	9,3	12,9 15,0
Approved load in cracked concrete with compressive strength f _{ck,cube} 20 N/mm ^{1) 2)}	N _{zul}	[kN]	5,7	5,7	10,0	5,7	10,0	14,3 17,1
Minimum edge distance in load direction ¹⁾	C ₁	[mm]	105	105	130	105	130	165
Minimum edge distance crosswise to load direction ¹⁾	C ₂	[mm]	160	160	195	160	195	250
Minimum centre distance	S _{min}	[mm]	320	320	390	320	390	500
Max. torque with impact screw driver		[Nm]	400	650		650		

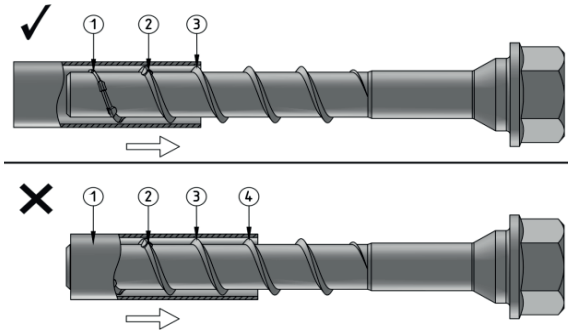
¹⁾ See drawing

²⁾ The partial safety for load actions γ_F=1,4 were considered for determining the load.



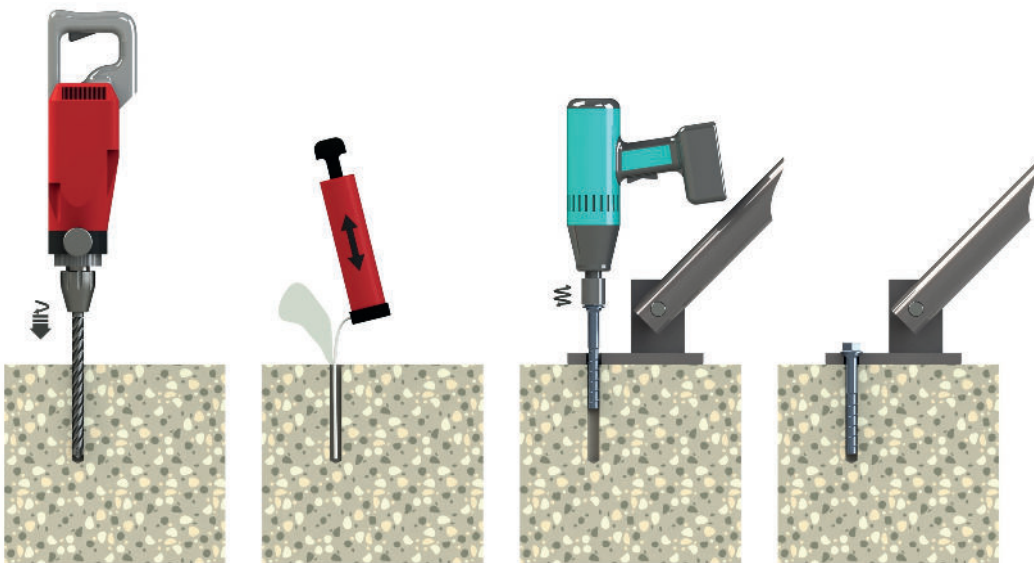
Installation Instructions

Important notice before installation



- Before each reuse, the degree of wear on the thread must be checked with an appropriate ring gauge.
- The concrete screw may only be reused if no more than 3 turns of the thread can enter into the ring gauge.
- Screws with visible damage, e.g. caused by corrosion wear, must not be reused as a rule.

Installation



- 1) Create borehole.
- 2) Thoroughly clean borehole.
- 3) Screw in concrete screw.
- 4) The screw head must fully contact the fixture