

# TOGE TSM BC

Parapet anchor for fastening of scaffolding and forwork in renovation areas

### High Loads

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

### Frost proof

Sealing the borehole prevents water penetration and frost damage in winter.

### Fast and safe installation

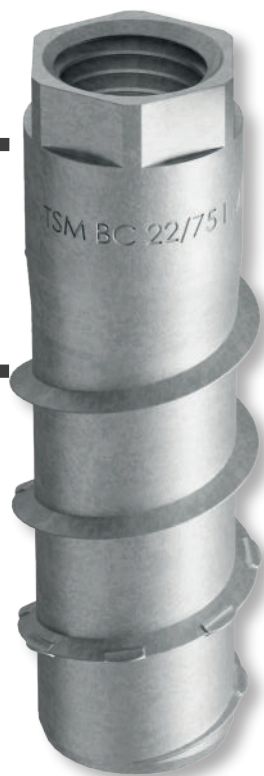
The optimized thread enables a quick and easy embedment process.

### Immediate Load

Immediately loadable directly after installation.

### Sustainable

Reusability of the fastening part.



## Approval

### Approval

General technical approval Z-21.8-2048.

### Base Materials

Application in cracked and non-cracked concrete of strength classes from C20/25 to C50/60.



## Installation of parapet anchor with connector M24 according to Z-21.8-2048

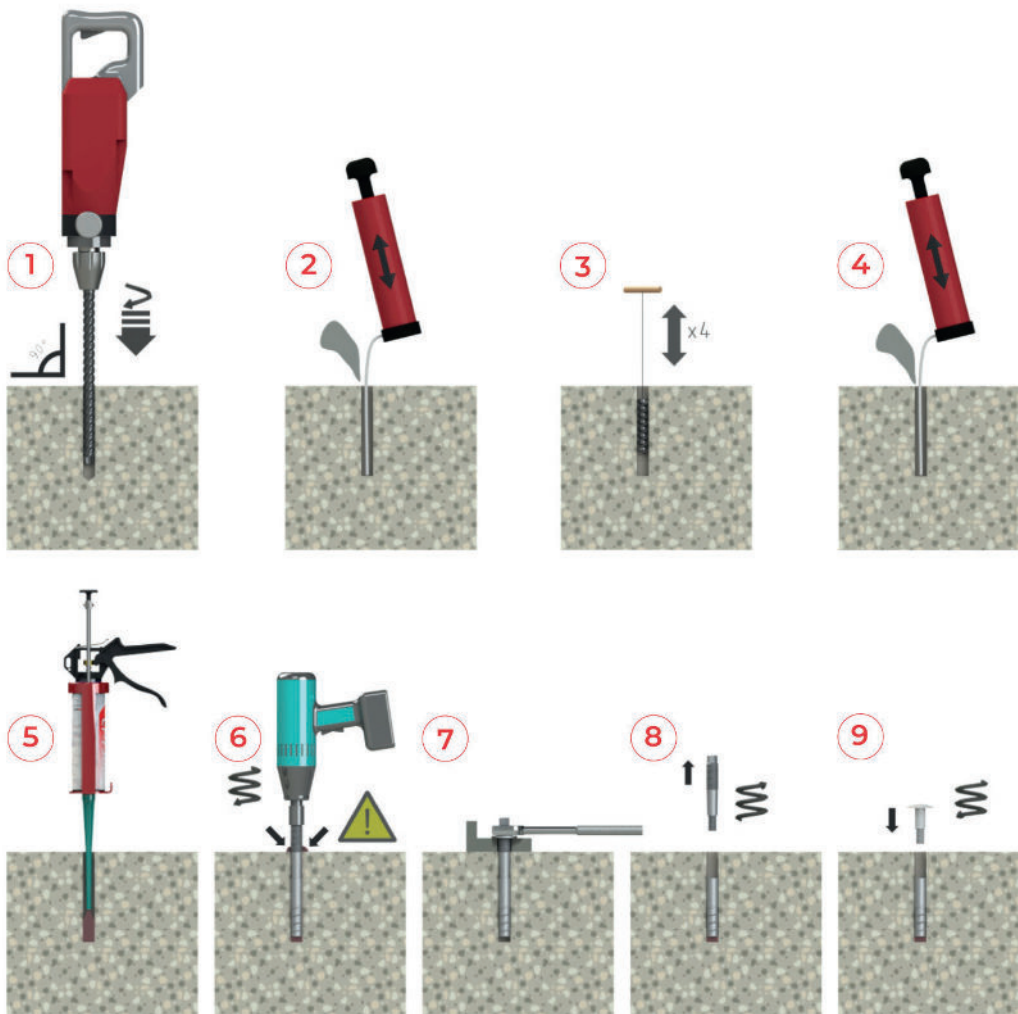
Anchor size			TSM BC 22
Screw length	L	[mm]	75
Nominal diameter of drill bit	$d_o$	[mm]	22
Depth of drill hole	$h_o \geq$	[mm]	160
Effective anchorage depth	$h_{ef}$	[mm]	150
Diameter of clearance hole in the fixture	$d_f \leq$	[mm]	28
Installation torque (for metrical thread)	$T_{inst}$	[mm]	80
Minimum edge distance	$C_{min} \geq$	[mm]	225
Minimum spacing	$S_{min} \geq$	[mm]	450
Minimum basement thickness	$h_{min} \geq$	[mm]	200
Hexagon drive for mounting the screws	SW	[Nm]	17
Permissible tension load in cracked concrete C20/25 <sup>1) 2)</sup>	$N_{Rd,c} \geq$	[kN]	48,7
Permissible tension load in cracked concrete > C20/25 <sup>1) 2)</sup>	$N_{Rd,s}$	[kN]	51,3
Design value of shear force for steel failure without lever arm <sup>1) 2)</sup>	$V_{Rd,s}$	[kN]	69,3
Rated torque of the tangential screwdriver	T	[Nm]	$\leq 650$

## Installation of parapet anchor with connector GW15 according to Z-21.8-2048

Anchor size			TSM BC 22
Screw length	L	[mm]	75
Nominal diameter of drill bit	$d_o$	[mm]	22
Depth of drill hole	$h_o \geq$	[mm]	160
Effective anchorage depth	$h_{ef}$	[mm]	150
Diameter of clearance hole in the fixture	$d_f \leq$	[mm]	17
Installation torque (for metrical thread)	$T_{inst}$	[mm]	80
Minimum edge distance	$C_{min} \geq$	[mm]	225
Minimum spacing	$S_{min} \geq$	[mm]	450
Minimum basement thickness	$h_{min} \geq$	[mm]	200
Hexagon socket drive for mounting the screws	SW	[Nm]	12
Permissible tension load in cracked concrete C20/25 <sup>1) 2)</sup>	$N_{Rd,c} \geq$	[kN]	48,7
Permissible tension load in cracked concrete > C20/25 <sup>1) 2)</sup>	$N_{Rd,s}$	[kN]	51,3
Design value of shear force for steel failure without lever arm <sup>1) 2)</sup>	$V_{Rd,s}$	[kN]	33,4
Rated torque of the tangential screwdriver	T	[Nm]	$\leq 650$

<sup>1)</sup> To determine the permissible load, the partial safety factor from the approval was taken into account on the resistance side.

<sup>2)</sup> The specified values apply regardless of center and edge distances.



- 1) Drill a hole perpendicular to the concrete surface.
- 2) Thoroughly blow out the borehole.
- 3) Brush the borehole 4x.
- 4) Thoroughly clean the borehole again.
- 5) Inject composite mortar.
- 6) Screw in screws with an impact screwdriver. After reaching the screw-in depth, the composite mortar must emerge at the concrete surface.
- 7) Fix the attachment.
- 8) After work, the screw-in aid can be easily unscrewed.
- 9) Seal the hole left behind with the screw cap.

## Processing instructions composite mortar

Temperature in ground	Processing Time	Min. curing time in dry borehole	Min. curing time in wet borehole
≥ -5°C	60 min	360 min	720 min
≥ 0°C	60 min	180 min	360 min
≥ 5°C	60 min	120 min	240 min
≥ 10°C	45 min	80 min	160 min
≥ 20°C	15 min	45 min	90 min
≥ 30°C	5 min	25 min	50 min
≥ 35°C	4 min	20 min	40 min