SA TS 101:2015

SA TS 101:2015 Compliant

Fire Rated performance in cracked and non-cracked concrete

National Code Compliant | European Technical Assessment | Cracked Concrete Approved | Seismic Approved Fasteners | Fire Rated Fasteners

ZINC

National Code Compliant | European Technical Assessment | Cracked Concrete Approved | Seismic Approved Fasteners | Fire Rated Fasteners

ZINC & STAINLESS STEEL

TOGE TSM CONCRETE SCREW RANGE

The Toge TSM range features quick and safe installation, high load capacities in both cracked and non-cracked concrete with undercut load transmission. The TSM can be easily removed and does not leave residue or metal components in the drilled hole. Loads can be achieved immediately upon installation.

TOGE TSM STAINLESS STEEL CONCRETE SCREW RANGE

The Stainless Steel 316 (A4) high corrosion resistant Toge TSM Concrete Screws are one-piece self-tapping anchors for concrete and masonry applications providing high load performance in cracked and non-cracked concrete base materials. Clean, low profile appearance gives a aesthetic finish to the project. (available in zinc hex)

TOGE TSM HIGH PERFORMANCE CONCRETE HANGER SCREW

National Code Compliant | European Technical Assessment | Cracked Concrete Approved | Seismic Approved Fasteners | Fire Rated Fasteners

ZINC CLEAR INTERNAL USE | ZINC CLEAR INTERNAL USE | GAL EXTERNAL USE

Part No.	Part No.	Part No.	Description	mm	mm	mm		mm	qty
TSMIM06055ZG			6 x 55mm Hanger (M8 / M10 Internal)	6	55	M8 / M10	-	13	50
	TSMB06055		6 x 55mm Hanger (M8 External Thread)	6	55	-	M8	10	100
		CPLRM8-M12	Coupler Nut M8 to M12	-	-	M8 to M12	-	16	100

TOGE TSM HIGH PERFORMANCE **HEX HEAD CONCRETE SCREWBOLTS**

National Code Compliant | European Technical Assessment | Cracked Concrete Approved | Seismic Approved Fasteners | Fire Rated Fasteners

ZINC CLEAR INTERNAL USE | 316 SS A4 EXTERNAL USE

Part No.	Part No.	Description	mm	mm	mm	mm	qty	qty
TSM06050	**TSM06050SS**	6x50mm	6	35	15	13	100	n/a
	TSM06060SS	6x60mm			25		100	n/a
TSM06080		6x80mm			45		100	n/a
	TSM08070SS	8x70mm	8	45	25	13	50	n/a
TSM08080	**TSM08080SS**	8x80mm			35		50	n/a
	TSM10090SS	10x90mm	10	55	35	15	50	n/a
TSM10100	**TSM10100SS**	10x100mm			45		50	n/a
	TSM10120SS	10x120mm			65		50	n/a
TSM12110		12x110mm	12	65	45	17	25	n/a
TSM14150		14x150mm	14	75	75	21	25	n/a

TOGE TSM HIGH PERFORMANCE **COUNTERSUNK CONCRETE SCREWBOLTS**

National Code Compliant | European Technical Assessment | Cracked Concrete Approved | Seismic Approved Fasteners | Fire Rated Fasteners

316 SS A4 EXTERNAL USE

Part No.	Description	mm	mm	mm	mm	qty	qty
TSMC06050SS	6x50mm	6	35	15	TX30 / VZ30	100	n/a
TSMC06065SS	6x65mm			30		100	n/a
TSMC06085SS	6x85mm			50		100	n/a
TSMC06105SS	6x105mm			70		100	n/a
TSMC08080SS	8x80mm	8	45	35	TX40 / VZ40	50	n/a
TSMC10090SS	10x90mm	10	55	35	TX50 / VZ50	50	n/a

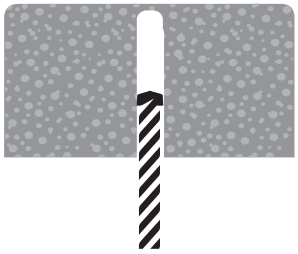
TOGE TSM HIGH PERFORMANCE **PAN HEAD CONCRETE SCREWBOLTS**

National Code Compliant | European Technical Assessment | Cracked Concrete Approved | Fire Rated Fasteners

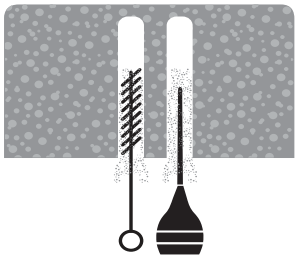
316 SS A4 EXTERNAL USE

Part No.	Description	mm	mm	mm	mm	qty	qty
TSMP06050SS	6x50mm	6	35	15	TX30 / VZ30	100	n/a
TSMP06060SS	6x60mm			25		100	n/a
TSMP06080SS	6x80mm			45		100	n/a
TSMP06100SS	6x100mm			65		100	n/a

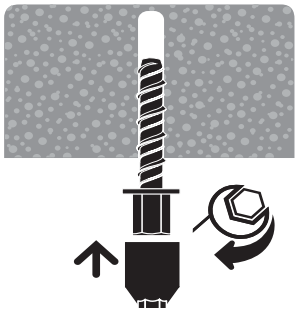
HANGER INSTALLATION



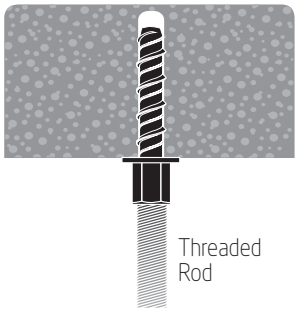
With the correct diameter drill bit, drill a hole to the correct depth (add at least one anchor diameter to the depth to prevent the fastener from bottoming out).



Clean dust and other material from the hole.

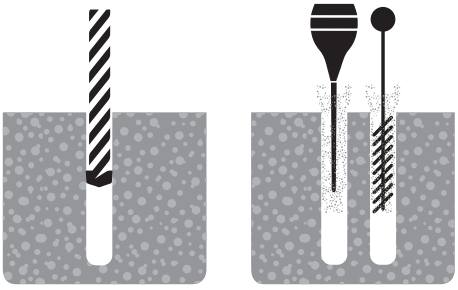


Attach the Anchor to the correct size socket driver and install anchor perpendicular to the base material substrate. Be sure not to over torque the anchor.

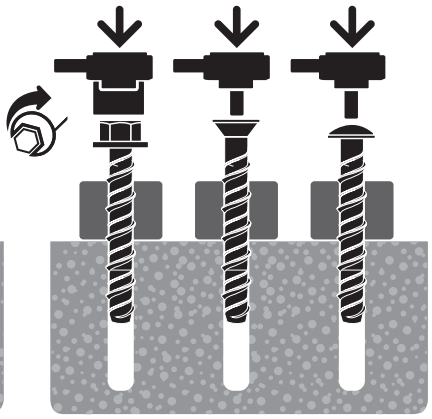


The head of the anchor should be set flush with the base material. Install the threaded rod. The thread should be fully engaged in the anchor.

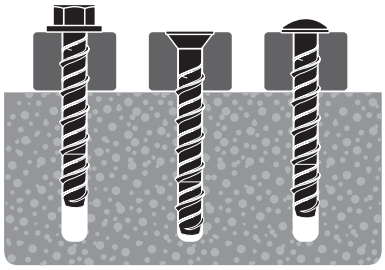
SCREWBOLT INSTALLATION



With the correct diameter drill bit, drill a hole to a depth of at least one anchor diameter deeper than required embedment.
Clean dust and other material from the hole.



Install with either a socket or cordless impact driver. Apply pressure against the fixing and rotate to engage the first thread.



Continue to tighten the anchor until flanged head is firmly seated against fixture. Installation complete!

TOGE TSM PERFORMANCE IN 32 MPa CONCRETE

Single anchor remote from edge

Part Number	European Technical Assessment	Drill Hole Diameter (mm)	Anchor Embedment (mm)	Fixture Hole Diameter (mm)	Installation Torque (Nm)	Min. Concrete Thickness (mm)	TENSILE DESIGN RESISTANCE Non-cracked Concrete (kN)	TENSILE DESIGN RESISTANCE Cracked Concrete (kN)	TENSILE DESIGN RESISTANCE Cracked Concrete SEISMIC (kN)	SHEAR DESIGN RESISTANCE Non-cracked Concrete (kN)	SHEAR DESIGN RESISTANCE Cracked Concrete (kN)	SHEAR DESIGN RESISTANCE Cracked Concrete SEISMIC (kN)
TSM B6		6	55	8	10	100	7.6	2.5	*CISMA 2.5	-	-	-
TSM 6		6	40	8	10	100	3.4	1.7	-	5.6	5.2	-
			55				7.6	3.4	*CISMA 3.3	5.6	5.6	-
TSM 8		8	45	12	20	100	6.3	4.2	-	8.6	6.3	-
			55				10.1	7.6	-	11.6	8.5	-
			65			120	13.4	10.1	C1 8.0	13.6	11.3	C1 6.8
TSM 10		10	55	14	40	100	10.1	7.6	-	11.6	8.5	-
			75			130	16.8	14.1	-	27.2	27.2	-
			85				21.0	17.0	C1 14.5			C1 12.2
TSM 12		12	65	16	60	120	13.4	10.1	-	15.0	10.7	-
			85			130	23.4	16.6	-	32.0	32.0	-
			100			150	30.5	21.7	C1 18.5			C1 16.8
TSM 14		14	75	18	80	130	18.8	13.4	-	18.7	13.3	-
			100			150	29.9	21.3	-	44.8	42.4	-
			115			170	37.6	26.8	C1 22.8		44.8	C1 17.9

Note: The TSM high performance anchor may be used in applications subject to static or quasi-static loading in reinforced or unreinforced normal weight concrete of strength classes C20/25 - C50/60. The TSM high performance anchor may be used in cracked or non-cracked concrete. For specific design information including minimum edge and anchor spacing information please refer to ETA-15/0514. C1 Seismic design loads have been derived using ETAG 001 Annex E & TR045. *Cisma Performance information is calculated using the relevant published ETA documents and calculated using ETAG 001 Annex C and incorporates the CISMA Seismic design recommendation.