

Building Product Information Sheet

Class 1

Product Name:

TOGE TSM IM - Rod Hanger Assembly

Date of Report:

27 / 09 / 2023

Product Line:

TOGE TSM - Threaded Rod Hanger and Concrete Screwbolts Range

Product Description and its intended use:

The Toge TSM range features quick and safe installation, high load capacities in both cracked and non-cracked concrete with undercut load transmission. Perfect for applications requiring safety critical threaded rod suspension, such as AC ducting, hanging pipe, fire protection, and cable-tray applications. The TSM can be easily removed and does not leave residue or metal components in the drilled hole that can cause corrosion. Loads can be achieved immediately upon installation

Key technical specifications:

- Product type: Concrete Hanger Screw
- Finish options: Zinc
- Head options: Internal thread (TSM IM) or External thread (TSM B).
- Base materials use: Concrete, cracked concrete, stone, solid brick, hollow brick.
- Special features: removable, European Assessment ETA, Seismic Rated, Fire Rated.
- Load performance: Light loads.
- Dimensions, impact screwdriver maximum torque capacity and other design values vary per part. Refer to document 'Toge TSM Technical Information' for specific values per part, available in the link below:

https://sestofasteners.co.nz/products/toge-tsm-im-rod-hanger-assembly?_pos=1&_sid=15a1de593&_ss=r

Product Identifier

TOGE TSM IM

Place of Manufacture:

Overseas

Manufacturer:

TOGE Dübel GmbH & Co. KG

Importer:

Sesto Fasteners Limited

Address: 5e Piermark Drive
Rosedale, Auckland
Postcode: 0632
Website: www.sestofasteners.co.nz
Email: orders@sestofasteners.co.nz
Phone: +64 94158564
NZBN: 9429041704103

Relevant Building Code Clauses:

- B1 Structure: Performance clauses B1.1, B1.2, B1.3.1, B1.3.2, B1.3.3, B1.3.4
- B2 Durability: Performance clauses B2.2
- C2 Prevention of Fire: Performance clause C2.1
- F2 Hazardous Building Materials: Performance clause F2.3.1

Statement on how the building product is expected to contribute to compliance:

- B1 Structure: clauses B1.1, B1.2, B1.3.1, B1.3.2, B1.3.3, B1.3.4:
 - TOGE TSM IM Threaded Rod Hanger Screws are compliant with the requirements referenced in National Construction Code (NCC), AS 5216:2018 and European Assessment (ETA) Documents and Guidelines (ETA) Documents and Guidelines (ETA-15/0514 of 28 May 2019). AS 5216 (Design of post-installed and cast-in fastenings in concrete) outlines the minimum requirements for the selection, design and assessment of cast-in anchor channel and post installed fasteners.
 - TOGE TSM IM Threaded Rod Hanger Screws hold C1 Seismic Assessment.
 - TOGE TSM range features quick and safe installation and 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.
 - Made in Germany.
 - TOGE TSM IM Threaded Rod Hanger Screws have been ETA assessed (ETA-15/0514 of 28 May 2019) for use in cracked and non-cracked concrete.
 - Ideal for applications requiring safety critical threaded rod suspension, such as AC ducting, hanging pipe, fire protection, and cable-tray applications.
 - Compatible with ICCONS Design PRO and DesignFIX engineering software.
 - B2 Durability: Performance clauses B2.2
 - Available in carbon steel zinc clear finish for internal use.
 - Designed for light duty load performance.
 - Shallow anchor embedment does not hit rebar.
 - New notches at the screw tip for easier setting, reduced torque and reduced concrete spalling.
 - TOGE TSM IM Threaded Rod Hanger Screws have been ETA tested for performance capacities in 32 MPA concrete. Values for tensile design resistance and shear design resistance in cracked and non-cracked concrete varies based on part dimensions and other factors. Refer to document 'Toge TSM Technical Information' for a summary of this data (page 8), available in the link below:
https://sestofasteners.co.nz/products/toge-tsm-im-rod-hanger-assembly?_pos=4&_sid=41d1bd6c1&_ss=r
 - Refer to document 'Toge TSM ETA Approval - Seismic Approval' for the full ETA-15/0514 report, available in the link above.
https://sestofasteners.co.nz/products/toge-tsm-im-rod-hanger-assembly?_pos=4&_sid=41d1bd6c1&_ss=r
 - C2 Prevention of Fire: Performance clause C2.1
 - TOGE TSM IM Threaded Rod Hanger Screws have fire rated performance in cracked and non-cracked concrete.
 - Suitable for fire protection applications requiring safety critical threaded rod suspension such as securing sprinkler piping.
 - F2 Hazardous Building Materials: Performance clause F2.3.1
 - TOGE TSM IM Threaded Rod Hanger Screws are safe when handled.
 - Done and Dustless certified: suitable for use with HELLER Set-Safe DR Hollow Drill Bit (see page 8, document 'Toge TSM Technical Information' in the link as above).
 - Good judgment, protective equipment and care is required when drilling into concrete to mitigate the risk of silicosis.
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Limitations on the use of the building product:

- C1 Seismic assessment only valid for the following embedment depths: TSM06 - 40mm + 55mm.
- Impact screwdriver maximum torque capacity, excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation torque guidelines. Refer to document 'Toge TSM Technical Information' for torque values, available in the link below:
https://sestofasteners.co.nz/products/toge-tsm-im-rod-hanger-assembly?_pos=4&_sid=41d1bd6c1&_ss=r
- TOGE TSM IM are suitable for light load applications such as AC ducting, hanging pipe, fire protection, and cable tray applications.
- Performance standard AS 5216:2018 covers post installed fasteners for 'Safety Critical' applications in concrete only. Safety critical applications are where failure may endanger human life, result in collapse or partial collapse of the structure, and/or cause considerable economic loss. All other types of fastening design including seismic design, fire design and stress development of rebar (ref. to AS3600) etc. For applications outside the scope of AS 5216:2018 / SA TS 101:2015 please refer to anchor manufacturers for guidance.
- Consider for TOGE TSM IM ETA performance values: 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 and C2 Seismic design loads have been derived using AS 5216:2021 / EN 1992-4:2018 & TR049 ($agap= 1.0$). Performance data in the above table has been calculated using the relevant published ETA and based on single anchor installation at characteristic spacing and edge distance parameters. Refer to (page 8) document 'Toge TSM ETA Approval - Seismic Approval' for limitations and conditions of the testing data, available as in the link above.

Design requirements that would support the use of the building product:

Installation steps:

- 1a. 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). OR
- 1b. Alternatively, use a Heller Set-Safe DE Hollow Drill Bit which vacuums out the dust (proceed to step 3).
2. Clean dust and other material from the hole.
3. 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. Install with either a socket or cordless impact driver.
4. 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.

Refer to page 8 document 'Toge TSM Technical Information' in the link for an illustrated reference guide, available in the link below:
https://sestofasteners.co.nz/products/toge-tsm-im-rod-hanger-assembly?_pos=4&_sid=41d1bd6c1&_ss=r

Installation requirements:

ICCONS Metal Drive Anchor Installation steps:

1. With the correct diameter drill bit, drill a hole to the depth of at least one diameter of the anchor deeper than required embedment.
2. Clean dust and other material from the hole.
3. Insert the anchor through the fixture and into the hole until the head is flush with the fixture.
4. Using a hammer, drive the nail into the drive anchor until the head is flush with the top of the anchor.
5. Installation complete.

Maintenance requirements:

N/A, no on-going maintenance required.

Is the building product subject to warning or ban under section 26?:

No

