

Declaration of Performance

Nr: TMH/01/20210906/1488-CPR-0644/Z



Revision No:	1
Revision carried out by:	Tomasz Golon
Revision date:	06.09.2021

1. Unique identification code of product-type:	TMH Ceiling Anchor	
2. Intended use/es:	Deformation-controlled expansion anchor for multiply use for non-structural applications in concrete	
3. Manufacturer:	Name:	Trutek Fasteners Polska Sp. z o.o.
	Address:	Al. Krakowska 38, Sękocin Janki 05-090 Raszyn, Polska
4. System/s of AVCP:	System:	2+
5. European Assessment Document:	In accordance with regulation (EU) No 305/2011 on the basis of European Assessment Document EAD 330747-00-0601 "Fasteners for use in concrete for redundant non-structural systems"	
	European Technical Assessment	ETA-20/0526 of 23rd of June 2020
	Issued by:	ITB - Building Research Institute in Warsaw
6. Notified body/ies:	Name:	Cerification Department of ITB - Building Research Institute in Warsaw
	Notified body/ies No:	1488
	No of Certificate of Constancy of Performance:	1488-CPR-0644/Z
7. Declared performance/es:	Safety in case of fire (BWR 2)	
	Essential characteristic	Performance
	Reaction to fire	Anchor satisfy requirements for Class A1
	Resistance to fire	See Annex C2
	Safety and accessibility in use (BWR 4)	
	Essential characteristic	Performance
	Characteristic resistance in concrete	See Annex C1
	Edge distance and spacing	See Annex C1

The performance of the product identified above is in conformity with the set of declared performance/es. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

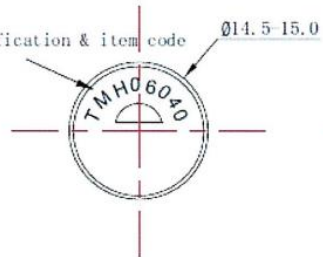
Janki, 6th of September 2021

Signed for and on behalf of the manufacturer by:

Tomasz Golon


Kierownik Produktu / Product Manager

Marking :
TMH06040 anchor identification & item code



- ① Wedge
- ② Bolt

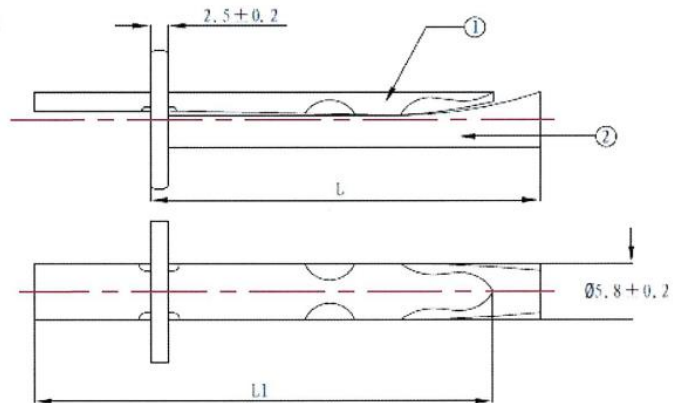


Table A1: Dimensions and material

TMH Ceiling Anchor			TMH 6×40	TMH 6×70
Anchor size			6	
Anchor diameter	d	mm	5,8 ± 0,2	
Head diameter	D	mm	14,5 - 15,0	
Length of bolt	L	mm	40 ± 1	70 ± 1
Length of wedge	L1	mm	43 ± 1	73 ± 1
Material: Carbon steel	Wedge	f_{uk}	N/mm ² 500	
		f_{yk}	N/mm ² 300	
	Bolt	f_{uk}	N/mm ² 400	
		f_{yk}	N/mm ² 270	
Coating			Zinc coat (≥ 5 µm) acc. to EN ISO 4042	

TMH Ceiling Anchor

Product description
Characteristic of the product

Annex A1
of European
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Specification of intended use

Anchorage subject to:

- Multiple use for non-structural applications.
- Static and quasi-static loads.
- Anchorages with requirements related to resistance to fire.

Base material:

- Reinforced or unreinforced normal weight concrete of strength class C20/25 at minimum to C50/60 at maximum according to EN 206.
- Non-cracked and cracked concrete.

Use conditions (environmental conditions):

- Structures subject to dry internal conditions.

Design:

- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be transmitted. The position of the anchor is indicated on the design drawings (e.g. position of the anchor relative to reinforcement or to supports, etc.).
- Anchorages under static and quasi-static loads and under fire exposure are designed in accordance with EN 1992-4:2018.

Installation:

- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- Use of the anchor only as supplied by the manufacturer without exchanging the components of an anchor.
- Anchor installation in accordance with the manufacturer's specifications and drawings and using the appropriate tools.
- Checks before placing the anchor to ensure that the strength class of the concrete in which the anchor is to be placed is in the range given and is not lower than that of the concrete to which the characteristic loads apply
- Check of concrete being well compacted, e.g. without significant voids.
- Edge distances and spacings not less than the specified values without minus tolerances.
- Positioning of the drill holes without damaging the reinforcement.
- Anchor installation such that the effective anchorage depth is complied with.
- After installation further turning of the anchor is not possible.
- The head of the anchor is supported on the fixture and is not damaged.
- In case of aborted hole: new drilling at a minimum distance away of twice the depth of the aborted hole or smaller distance if the aborted drill hole is filled with high strength mortar and if under shear or oblique tension load it is not in the direction of load application.
- Hole shall be clean.
- Anchor installation such that the effective setting depth is complied with. This compliance is ensured, if the thickness of the fixture is not larger than the maximum values marked on the anchor
- Anchor expansion by impact on the wedge of the anchor. The anchor is properly set if the wedge is fully dropped in.

TMH Ceiling Anchor	Annex B1 of European Technical Assessment ETA-20/0526
Intended use Specification	

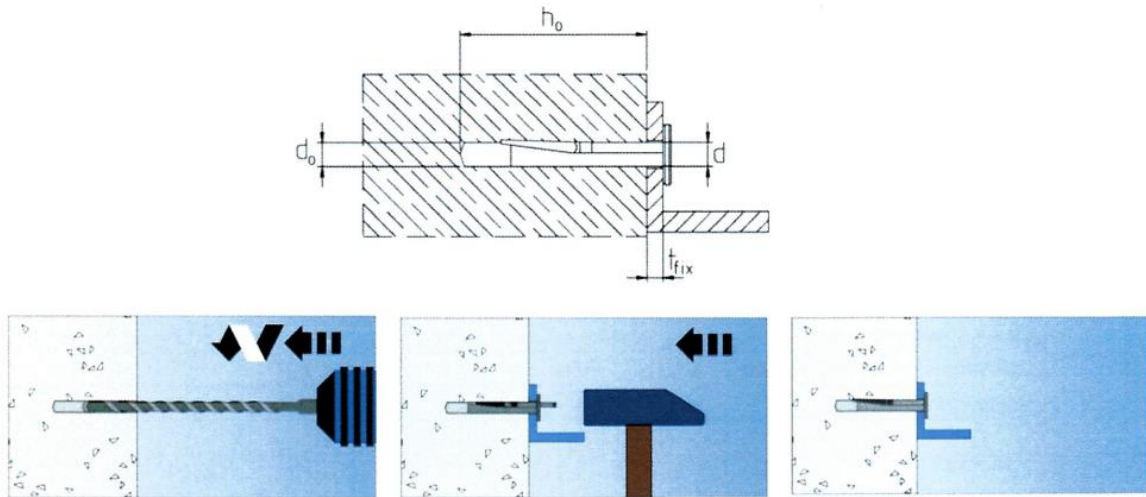


Table B1: Installation parameters

TMH Ceiling Anchor			TMH 6×40	TMH 6×70
Nominal diameter of drill hole	d_0	mm	6	
Depth of drill hole	$h_0 \geq$	mm	40	
Nominal embedment depth	h_{nom}	mm	30	
Effective embedment depth	h_{ef}	mm	30	
Thickness of the fixture, max.	t_{fix}	mm	5	35
Minimum thickness of member	h_{min}	mm	80	
Minimum edge distance	c_{min}	mm	200	
Minimum spacing	s_{min}	mm	150	

TMH Ceiling Anchor

Intended use
Installation parameters – concrete

Annex B2

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Table C1: Characteristic resistance in concrete class C20/25 to C50/60 acc. to EN 206

TMH Ceiling Anchor			TMH 6×40 TMH 6×70
All load directions			
Characteristic resistance	F_{Rk}^0	[kN]	3,0
Installation safety factor	γ_{inst}	[-]	1,4
Minimum member thickness	h_{min}	[mm]	80
Spacing	s_{cr}	[mm]	200
Edge distance	c_{cr}	[mm]	150
Shear load with lever arm			
Characteristic bending moment	$M_{Rk,s}^0$	[Nm]	6,6
Partial safety factor	$\gamma_{M,s}$	[-]	1,7

TMH Ceiling Anchor

Performances
Characteristic resistance

Annex C1

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Table C2: Characteristic resistance under fire exposure in non-cracked concrete class C20/25 to C50/60 acc. to EN 206

TMH Ceiling Anchor			TMH 6x40 TMH 6x70
Effective embedment depth h_{ef}	[mm]		30
All load directions			
Characteristic resistance $F_{Rk,fi}$ ¹⁾	R30	[kN]	0,75
	R60	[kN]	0,75
	R90	[kN]	0,75
	R120	[kN]	0,60
Spacing	$s_{cr,fi}$	[mm]	4 x h_{ef}
	s_{min}	[mm]	150
Edge distance	$c_{cr,fi}$	[mm]	2 x h_{ef}
	c_{min}	[mm]	200
The design method covers anchors with a fire attack from one side only. In case of fire attack from more than one side, the edge distance shall be ≥ 300 mm.			

¹⁾ in the absence of other national regulations a partial safety factor $\gamma_{M,fi} = 1,0$ is recommended

TMH Ceiling Anchor	Annex C2 of European Technical Assessment ETA-20/0526
Performances Characteristic resistance under fire exposure	