Designated according to The Construction Products (Amendment etc.) (EU Exit) Regulations 2020

UK Technical Assessment	UKTA-0836-23/6666 of 03/02/2023
Technical Assessment Body issuing the UK Technical Assessment:	British Board of Agrément
Trade name of the construction product:	TMH Ceiling Anchor
Product family to which the construction product belongs:	Deformation-controlled expansion anchor for multiple use for non-structural applications in concrete
Manufacturer:	Trutek Fasteners Polska Al. Krakowska 38, Janki 05-090 Raszyn, Warsaw Poland
Manufacturing plant(s):	Factory Plant No 7
This UK Technical Assessment contains:	10 Pages including 3 Annexes
This UK Technical Assessment is issued in accordance with The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 on the basis of:	UKAD 330747-00-0601: “Fasteners for use in concrete in redundant for non-structural systems”

1. Technical description of the product

The TMH Ceiling Anchor size Ø6 is a deformation-controlled expansion anchor. The TMH Ceiling Anchor is made of galvanized steel.

The anchor is installed in a drilled hole and anchored by deformation-controlled expansion.

The product description is given in Annex A.

2. Specification of the intended use(s) in accordance with the applicable UK Assessment Document (hereinafter UKAD)

The performance given in Annex C are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B.

The provisions made in this UK Technical Assessment are based on assumed working life of the anchor of 50 years. The indications given on working life cannot be interpreted as a guarantee given by the produced or the British Board of Agrément, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3. Performance of the product and references to the methods used for its assessment

3.1. Mechanical resistance and stability (BWR 1)

Not relevant.

3.2. Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1
Resistance to fire	Annex C2

3.3. Health, hygiene and the environment (BWR 3)

Not relevant.

3.4. Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Characteristic resistance in concrete	Annex C1
Edge distance and spacing	Annex C1

3.5. Protection against noise (BWR 5)

Not relevant.

3.6. Energy economy and heat retention (BWR 6)

Not relevant.

3.7. Sustainable use of natural resources (BWR 7)

No performance assessed.

4. Assessment and verification of constancy of performance (hereinafter AVCP) system applied

4.1. System of assessment and verification of constancy of performance

According to UKAD No. 330747-00-0601 and Annex V of the Construction Products Regulation (Regulation (EU) 305/2011) as brought into UK law and amended, the system of assessment and verification of constancy of performance (AVCP) 2+ applies.

5. Technical details necessary for the implementation of the AVCP system, as provided for in the applicable UKAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with the British Board of Agrément and made available to the UK Approved Bodies involved in the conformity attestation process.

5.1. UKCA marking for the product/ system must contain the following information:

- Identification number of the Approved Body
- Name/address of the manufacturer of the product/ system
- Marking with intention of clarification of intended use
- Date of marking
- Number of certificate of constancy of performance (where applicable)
- UKTA number.

On behalf of the British Board of Agrément 	
Date of Issue: 3 February 2023	**Hardy Giesler** Chief Executive Officer

British Board of Agrément,
1st Floor Building 3,
Hatters Lane,
Croxley Park
Watford
WD18 8YG

ANNEX A1
Product description / Characteristic of the product

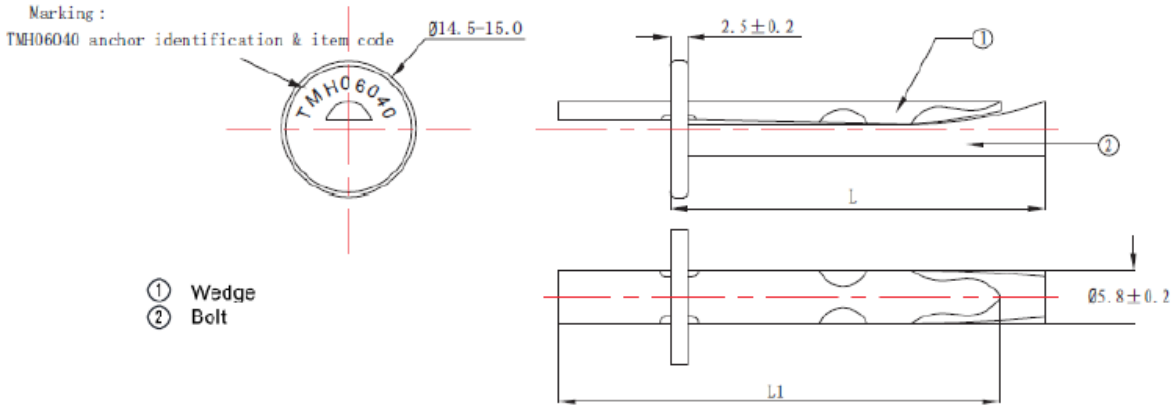

Table A1: Dimensions and material

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/mm²	500	
		f_{yk}	N/mm²	300	
	Bolt	f_{uk}	N/mm²	400	
		f_{yk}	N/mm²	270	
Coating			Zinc coat (≥ 5 µm) acc. to EN ISO 4042		

ANNEX B1
Intended Use / Specifications

Anchorages 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.

ANNEX B2
Intended Use / Installation parameters - concrete

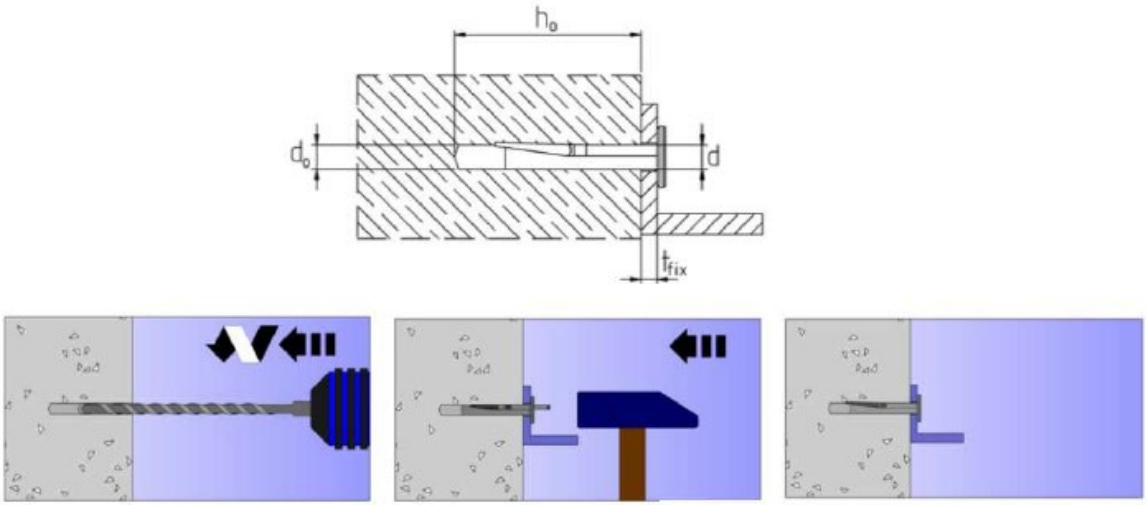

Table B1: Installation parameters

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	

ANNEX C1
Performances / Characteristic resistance

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^0Rk	kN	3.0
Installation safety factor $\gamma inst$	-	1.4
Minimum member thickness $hmin$	mm	80
Spacing	mm	200
Edge distance	mm	150
Shear load with lever arm		
Characteristic bending moment M^0Rk,s	Nm	6.6
Partial safety factor $\gamma_{M,s}$	-	1.7

ANNEX C2
Performances / Characteristic resistance under fire exposure

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 6×40** **TMH 6×70**
Effective embedment depth h_{ef}		mm	30
All load directions			
Characteristic resistance FRk,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
	$c_{cr,fi}$	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

British Board of Agrément,
1st Floor Building 3,
Hatters Lane,
Croxley Park
Watford
WD18 8YG