



ETA-Danmark A/S
Göteborg Plads 1
DK-2150 Nordhavn
Tel. +45 72 24 59 00
Fax +45 72 24 59 04
Internet www.etadanmark.dk

Authorised and notified according
to Article 29 of the Regulation (EU)
No 305/2011 of the European
Parliament and of the Council of 9
March 2011

MEMBER OF EOTA



European Technical Assessment ETA-16/0843 of 26/10/2016

I General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S

Trade name of the construction product:

TASSELLO MFT CON CHiodo PER PANNELLI
ISOLANTI Ø58

Product family to which the above construction product belongs:

Nailed-in plastic anchor for fixing of external thermal insulation composite systems with rendering in concrete, masonry, lightweight aggregate concrete and autoclaved aerated concrete

Manufacturer:

Unifix SWG s.r.l
Via Enzenberg, 2
IT-39018 Terlano (Bolzano)
Tel. +39 0471 54 52 42
Fax +39 0471 54 52 80
Internet www.unifix.it

Manufacturing plant:

Unifix SWG s.r.l
Manufacturing Plant I

This European Technical Assessment contains:

12 pages including 6 annexes which form an integral part of the document

This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:

Guideline for European technical approval of "Plastic anchors for fixing of external thermal insulation composite systems with rendering", ETAG 014, Edition February 2011, used as European Assessment Document (EAD) according to Article 66 Paragraph 3 of Regulation (EU) No 305/2011.

This version replaces:

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

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II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of product and intended use

Technical description of the product

The anchor MFT for fixing of external thermal insulation composite systems (ETICS) is a nailed-in anchor which consist in a plastic part made of polyethylene and an accompanying specific nail made of glass fibre reinforced polyamide PA6+30%GF.

The anchor is expanded by hammering the nail into the sleeve. It is possible to install the anchor flush or deep-mounted to the surface of the insulation.

The product description is given in Annex A.

2 Specification of the intended use in accordance with the applicable EAD

The performances given in Section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B1 to B3

The provisions made in this European Technical Assessment are based on an assumed intended working life of the anchor of 25 years.

The indications given on the working life cannot be interpreted as a guarantee given by the producer or Assessment Body, 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 Characteristics of product

Mechanical resistance and stability (BWR 1):

The essential characteristics regarding mechanical resistance and stability are included under the Basic Works Requirement Safety in use.

Safety in case of fire (BWR 2):

No Performance determined

Hygiene, health and the environment (BWR3):

The product does not contain/release dangerous substances specified in TR 034, dated March 2012.

Regarding the dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

Safety in use (BWR4):

The essential characteristics are detailed in the Annex C1.

Sustainable use of natural resources (BWR7)

No performance determined

Other Basic Requirements are not relevant.

General aspects

The verification of durability is part of testing of the essential characteristics. Durability is only ensured if the specifications of intended use according to Annex B are taken into account.

3.2 Methods of assessment

The assessment of fitness of the anchor for the intended use in relation to the requirements for mechanical resistance and stability and safety in use in the sense of the Basic Requirements 4 has been made in accordance with the Guideline for European Technical Assessment of "Plastic anchors for fixing of external thermal insulation composite systems with rendering", ETAG 014, Edition February 2011.

In addition to the specific clauses relating to dangerous substances contained in this European technical Assessment, there may be other requirements

applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

4 Assessment and verification of constancy of performance (AVCP)

4.1 AVCP system

According to the decision 97/463/EC of the European Commission, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) is 2+.

5 Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD

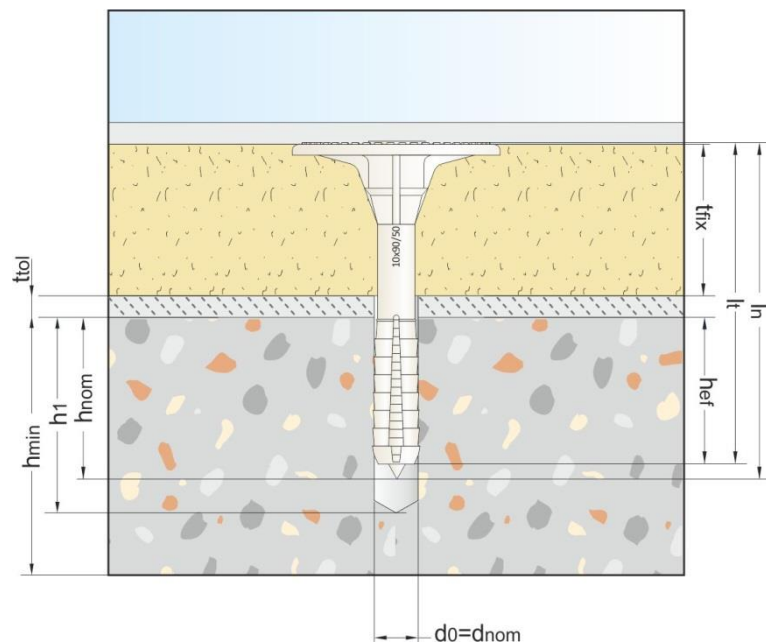
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark

Issued in Copenhagen on 2016-10-26 by



Thomas Bruun
Managing Director, ETA-Danmark A/S

Installed conditions



Installation details


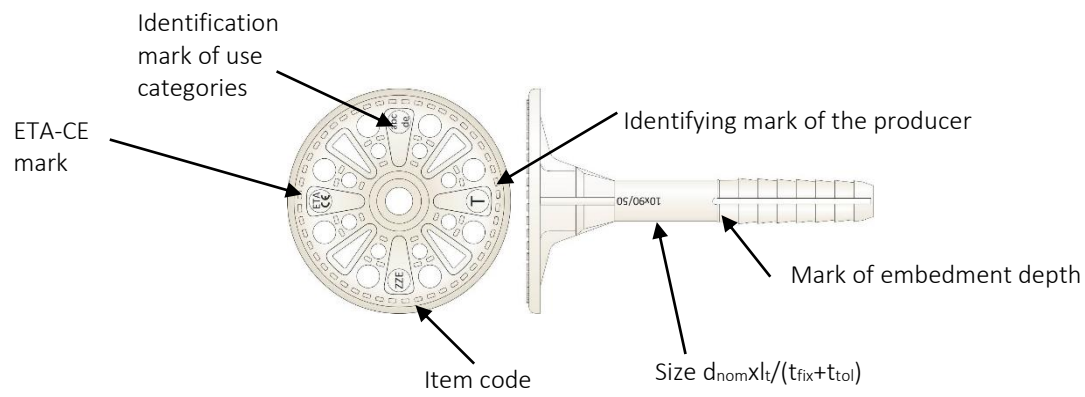
d_{nom}	Outside diameter of the anchor
d_n	Outside diameter of the nail (not shows in the picture)
∅	Anchor's plate diameter (not shows in the picture)
t_{fix}	Thickness of the insulating panel
t_{tol}	Thickness of equalizing layer for compensation of tolerances or non-loadbearing coating
d₀	Diameter of the drill hole
h₁	Depth of the hole to the deepest point
h_{min}	Minimum thickness of the concrete member
h_{nom}	Overall anchor embedment depth
h_{ef}	Anchorage depth
l_n	Nail's length
l_t	Anchor's length

Unifix SWG plastic anchor for the fixing of ETICS, MFT

Product description - Installed anchor

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Marking

Nail ¹⁾	 <p>¹⁾Nails available even in different colors from those shown</p>
Plug	



Materials

ITEM	Description	Color
Nail	Fiber glass reinforced Polyamide 6	White, Black, Other Color
Plug	High density Polyethylene	White

Dimensions

Plug dimensions (d _{nom} x l _t) [mm]	t _{fix} +t _{tol} [mm]	Anchor's plate diameter Ø [mm]	Nail dimensions (d _n x l _n) [mm]
10x70	30	58	6x75
10x90	50		6x95
10x110	70		6x115
10x130	90		6x135
10x150	110		6x155
10x180	140		6x185
10x210	170		6x215
10x240	200		6x245

Setting tools

Tool	Item code – anchor's size [mm]	Image
Drill bits	0648 100 110 – 10x70 and 10x90 0648 100 160 – 10x110 to 10x150 0648 100 210 – 10x180 0648 100 260 – 10x210 and 10x240	
Blowing pump	0903 400 501 – all sizes For drill holes deeper than 70 [mm] a blowing pump extension shall be used (alternatively, for the hole cleaning, vacuum cleaner should be used)	

Unifix SWG plastic anchor for the fixing of ETICS, MFT

Product description - Dimension

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Additional Plates MFT/D		
Diameter	Drawing	Marks
Ø 90		T; ZZER; Ø90
Ø 110		T; ZZER; Ø110
Ø 140		T; ZZER; Ø140
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Product description – Additional Plates MFT/D		

Specifications of intended use

Anchorage subject to:

- The anchor may only be used for transmission of wind suction loads and shall not be used for the transmission of dead loads of the thermal insulation composite system.

Base materials:

- Normal weight concrete (use category A) according to Annex C1.
- Solid masonry (use category B), according to Annex C1.
- Hollow or perforated masonry (use category C), according to Annex C1.
- Lightweight aggregate concrete (use category D), according to Annex C1.
- Autoclaved aerated concrete (use category E), according to Annex C1.
- For other base materials of the use categories A, B, C, D and E the characteristic resistance of the anchor may be determined by job site tests according to ETAG 014 Edition February 2011, Annex D.

Temperature Range:

- 0°C to +40°C (max. short term temperature +40°C and max. long term temperature +24°C).

Design:

- The anchorages are designed in accordance with ETAG 014 Edition February 2011 under the responsibility of an engineer experienced in anchorages and masonry work.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be anchored. The position of the anchors is indicated on the design drawings.
- Fasteners are only to be used for multiple fixings for non-structural applications, according to ETAG 014 Edition February 2011.

Installation:

- Drilling method according to Annex C1.
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters on the site.
- Installation temperature from 0°C to +40°C
- Exposure to UV due to solar radiation of the anchor not protected by rendering ≤ 6 weeks.

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Intended use - Specifications

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Table B1: Installation parameters for use categories A, B, C, D and E

Anchor type			MFT Ø10
Nominal drill hole diameter	d_0	= [mm]	10
Cutting diameter of drill bit	d_{cut}	≤ [mm]	10,45
Depth of drill hole to deepest point	h_1	≥ [mm]	50
Overall plastic anchor embedment depth in the base material	h_{nom}	≥ [mm]	40

Table B2: Installation parameters for cat. “C” only valid for tested masonry units (see Table C1 Annex C1)

Anchor type			MFT Ø10
Nominal drill hole diameter ¹⁾	d_0	= [mm]	10
Cutting diameter of drill bit	d_{cut}	≤ [mm]	10,45
Depth of drill hole to deepest point	h_1	≥ [mm]	50
Overall plastic anchor embedment depth in the base material	h_{nom}	≥ [mm]	40

¹⁾The hole must be drilled in rotary mode only

Table B3: Installation parameters alternative option for use category “E”

Anchor type			MFT Ø10
Nominal drill hole diameter	d_0	= [mm]	10
Cutting diameter of drill bit	d_{cut}	≤ [mm]	10,00 ²⁾
Depth of drill hole to deepest point	h_1	≥ [mm]	50
Overall plastic anchor embedment depth in the base material	h_{nom}	≥ [mm]	40

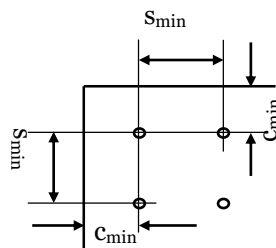
²⁾Use a drill bit for metals

Table B4: Anchor distances and dimensions of members

Anchor type			MFT Ø10
Minimum thickness of member for weather resistant skin of external wall panels	h_{min} ³⁾	≥ [mm]	50
Minimum thickness of member	h_{min}	≥ [mm]	100
Minimum spacing	s_{min}	= [mm]	100
Minimum edge distance	c_{min}	= [mm]	100

³⁾ only valid for weather resistant skin of external wall panels made of concrete (use category “A”).

Scheme of distances and spacing



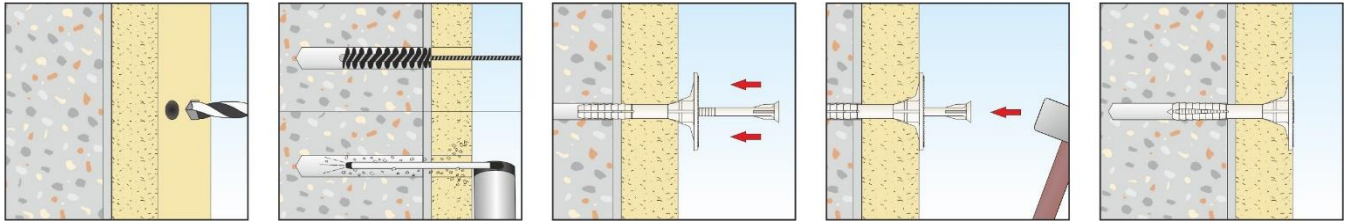
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Installation parameters for use categories

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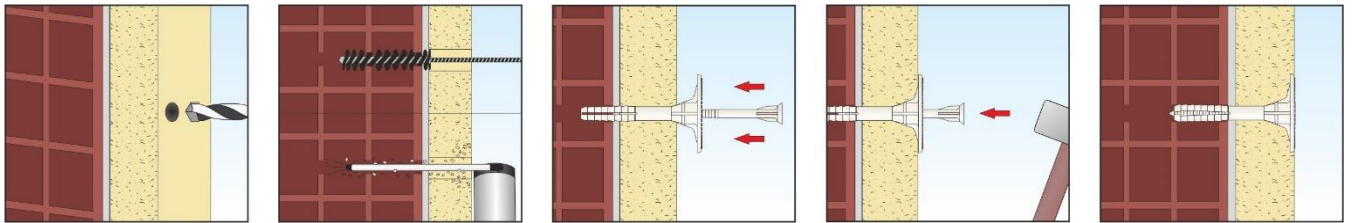
Installation instructions

Installation instructions for use categories A and B



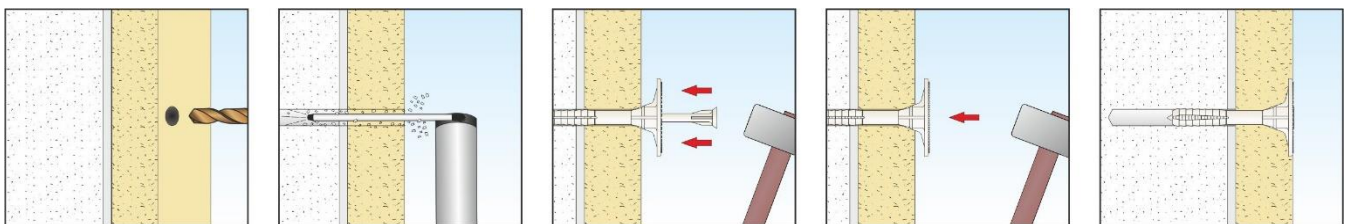
Step1	Drill a hole in the insulating panel and in the concrete in rotary plus hammer mode
Step2	Remove the dust into the hole using a brush and a blowing pump (or an aspirator)
Step3	Hammer the plug in the hole until the anchor's plate is in line with the insulating panel and place the nail
Step4	Hammer the nail in the plug

Installation instructions for use categories C and D



Step1	Drill a hole in the insulating panel and in the concrete in rotary mode
Step2	Remove the dust into the hole using a brush and a blowing pump (or an aspirator)
Step3	Hammer the plug in the hole until the anchor's plate is in line with the insulating panel and place the nail
Step4	Hammer the nail in the plug

Installation instructions for use category E



Step1	Drill a hole in the insulating panel and in the concrete in rotary mode using a drill bit for metals
Step2	Remove the dust into the hole using a brush and a blowing pump (or an aspirator)
Step3	Hammer the plug and the nail together in the hole until the anchor's plate is in line with the insulating panel

Unifix SWG plastic anchor for the fixing of ETICS, MFT

Installation procedure

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Table C1: Characteristic resistance to tension loads N_{Rk} for a single anchor in kN

Base material	Bulk density class ρ [kg/m ³]	Minimum compressive strength f_b [N/mm ²]	Remarks	Drill mode ¹⁾	Characteristic resistance N_{Rk} [kN]
Concrete C 12/15	-		EN 206-1:2000	R+H	0,75
Concrete C16/20 - C50/60					0,90
Solid masonry type "IBL U11-M" (120x250x55)	1.540	17	EN 771-1:2011	R+H	1,2
Hollow masonry type "Toppetti blocco leggero" (120x250x250)	538	6	EN 771-1:2011	R	0,4
Lightweight aggregate concrete type "Leca CLS 1600"	1.600	8	EN 12390-3, EN 206-1	R	0,2
		25	EN 12390-3, EN 206-1	R	0,6
Autoclaved Aerated Concrete	350	2	EN 771-4	R	0,10
Partial safety factor				$\gamma_M^{2)}$	2

1) H = Hammer drilling, R = Rotary drilling

2) In absence of other national regulations

Table C2: Plate stiffness acc. to EOTA Technical Report TR 026:2007-06

Anchor type	Max. size of the anchor plate [mm]	Load resistance of the anchor plate [kN]	Plate stiffness [kN/mm]
MFT \varnothing 10	58	1,63	0,3

Table C3: Displacements

Base material	Tension load F_{Rd} [kN]	Displacements δ_m [mm]
Concrete (use category A)	0,32	1,0
Solid masonry (use category B)	0,43	1,2
Hollow masonry (use category C)	0,14	0,2
Lightweight concrete (LC8, use category D)	0,07	0,5
Autoclaved Aerated Concrete (use category E)	0,04	0,2

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Performances: Characteristic resistance of the anchor, plate stiffness and displacements

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