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European Technical Assessment

ETA-11/0280 of 17/12/2018

General Part

Technical Assessment Body issuing the European Technical Assessment	Instytut Techniki Budowlanej
Trade name of the construction product	ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt
Product family to which the construction product belongs	Nailed-in plastic anchors for fixing of external thermal insulation composite systems with rendering in concrete and masonry
Manufacturer	LR ETANCO 66 Route de Sartrouville-BP 49 F-78231 Le PECQ Cedex France
Manufacturing plant	Plant no. 1, Poland
This European Technical Assessment contains	19 pages including 3 Annexes which form an integral part of this Assessment
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	European Assessment Document EAD 330196-01-0604 "Plastic anchors made of virgin or non-virgin material for fixing of external thermal insulation composite systems with rendering"
This version replaces	ETA-11/0280 issued on 21/06/2013 ETA-13/0744 issued on 21/06/2013

This European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and shall be identified as such.

Specific Part

1 Technical description of the product

The ETANCO SUPER ISO II Φ10 nailed in plastic anchor consists of ŁI3A anchor sleeve with a plate made of virgin polypropylene and an accompanying GW3A nail as an expansion pin made of the glass fibre reinforced polyamide.

The ETANCO SUPER ISO II Φ10Mt nailed in plastic anchor consists of ŁI3A anchor sleeve with a plate made of virgin polypropylene and an accompanying GW3AMt nail as expansion pin made of galvanized steel.

The ETANCO SUPER ISO II LONG Φ10 nailed in plastic anchor consists of ŁI3AL anchor sleeve with a plate made of virgin polypropylene and an accompanying GW3A nail as an expansion pin made of the glass fibre reinforced polyamide.

The ETANCO SUPER ISO II LONG Φ10Mt nailed in plastic anchor consists of ŁI3AL anchor sleeve with a plate made of virgin polypropylene and an accompanying GW3AMt nail as expansion pin made of galvanized steel.

The ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt anchors may in addition be combined with the additional plate T-140, made of the polyamide or polypropylene.

The drawings and the description of the products are given in Annex A.

2 Specification of the intended use in accordance with the applicable European Assessment Document (EAD)

The performances given in clause 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B.

The provisions made in this European Technical Assessment are based on an assumed 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 Technical 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 Performance of the product

3.1.1 Hygiene, health and the environment (BWR 3)

No performance assessed.

3.1.2 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Characteristic resistance	Annex C1 and C2
Edge distances and spacing	Annex B2
Plate stiffness	Annex C3
Displacements	Annex C4 and C5

3.1.3 Energy economy and heat retention (BWR 6)

No performance assessed.

3.2 Methods used for the assessment

The assessment of products has been made in accordance with the EAD 330196-01-0604 „Plastic anchors made of virgin or non-virgin material for fixing of external thermal insulation composite systems with rendering".

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

According to the Decision 97/463/EC of the European Commission of 27 June 1997 the system 2+ of assessment and verification of constancy of performance (see Annex V to the Regulation (EU) No 305/2011) applies.

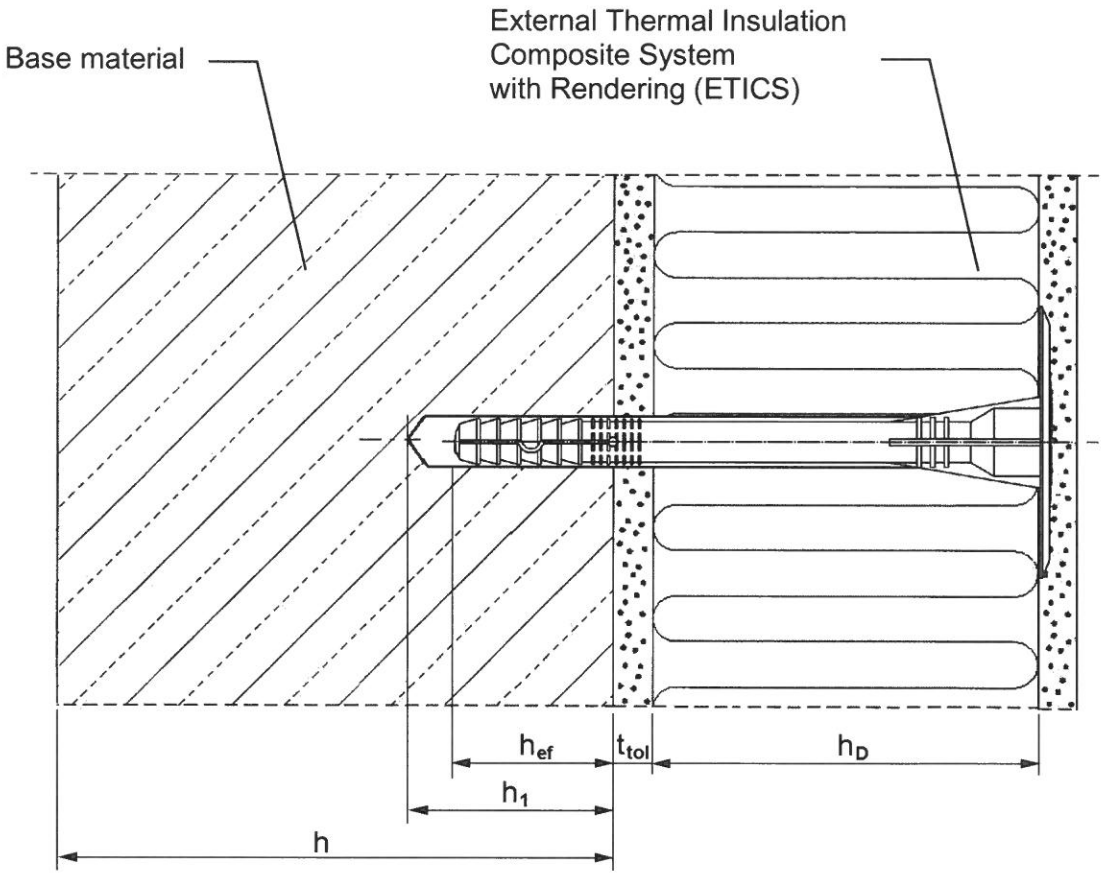
5 Technical details necessary for the implementation of the AVCP system, as provided in the applicable European Assessment Document (EAD)

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited in Instytut Techniki Budowlanej.

For the type testing the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases the necessary type testing has to be agreed between Instytut Techniki Budowlanej and the notified body.

Issued in Warsaw on 17/12/2018 by Instytut Techniki Budowlanej

Krzysztof Kuczyński, PhD
Deputy Director of ITB



Intended Use

Fixing of external thermal insulation composite systems in concrete and masonry

Legend

h_{ef} = effective anchorage depth

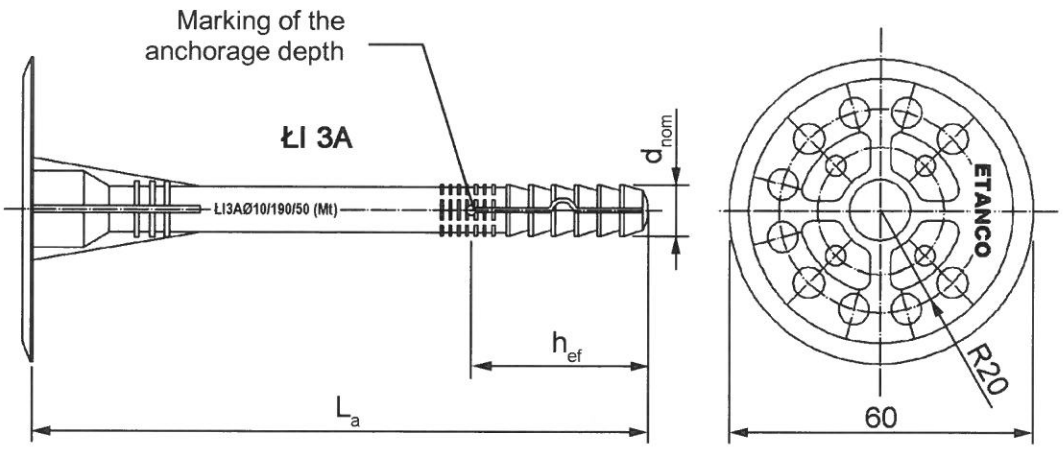
h_1 = depth of drill hole in base material

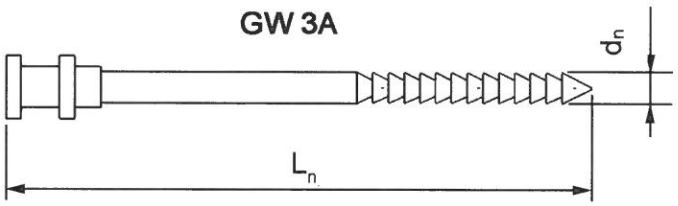
h = thickness of base material

h_D = thickness of insulation material

t_{tol} = thickness of equalizing and/or non-load-bearing layer

ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt	**Annex A1** of European Technical Assessment ETA-11/0280
Product description Installation conditions	





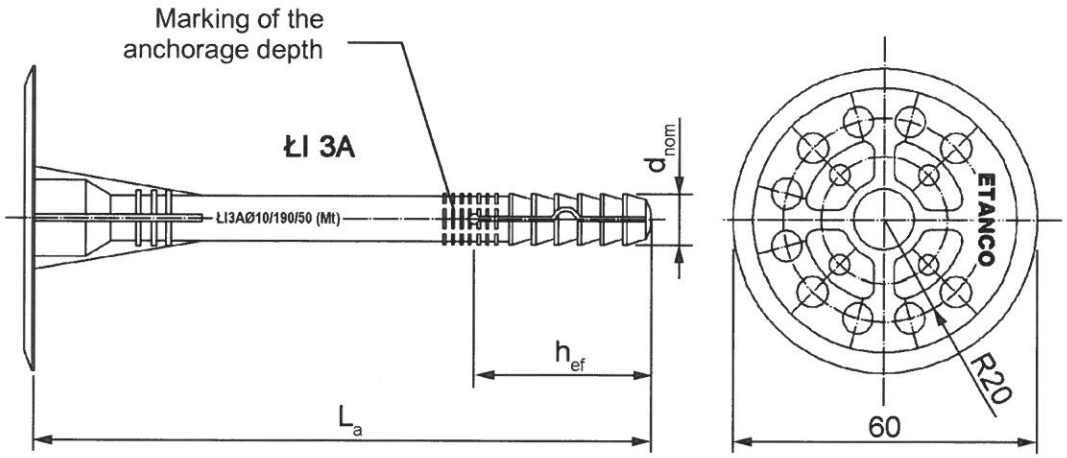
Marking:
Identifying mark: (ETANCO)
Sleeve type: (ŁI3A)
Length of anchor: (e.g. 190)
Nominal diameter: d_{nom} (ϕ10)

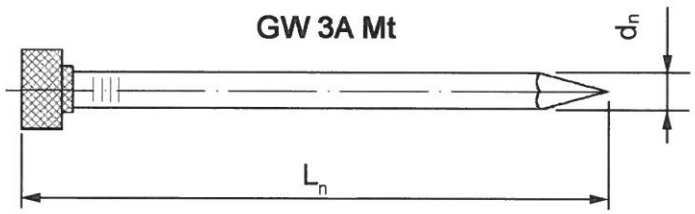
Table A1: ETANCO SUPER ISO II Φ10 anchor types and dimensions [mm]

Anchor type	Anchor sleeve				Expansion pin	
	d_{nom}	L_a	D	$h_{ef\ (AB)}$	d_n	L_n
SUPER ISO II/10/90	10	90	60	45	5,0	90
SUPER ISO II/10/110	10	110	60	45	5,0	110
SUPER ISO II/10/120	10	120	60	45	5,0	120
SUPER ISO II/10/135	10	135	60	45	5,0	135
SUPER ISO II/10/140	10	140	60	45	5,0	140
SUPER ISO II/10/150	10	150	60	45	5,0	150
SUPER ISO II/10/160	10	160	60	45	5,0	160
SUPER ISO II/10/170	10	170	60	45	5,0	170
SUPER ISO II/10/180	10	180	60	45	5,0	180
SUPER ISO II/10/190	10	190	60	45	5,0	190
SUPER ISO II/10/200	10	200	60	45	5,0	200
SUPER ISO II/10/220	10	220	60	45	5,0	220
SUPER ISO II/10/240	10	240	60	45	5,0	240
SUPER ISO II/10/260	10	260	60	45	5,0	260

$h_{ef\ (AB)}$ – for anchors in the base material category A and B
Determination of maximum thickness of insulation material: $h_D = L_a - t_{tol} - h_{ef}$

ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt	**Annex A2** of European Technical Assessment ETA-11/0280
Product description Marking and dimensions of the ETANCO SUPER ISO II Φ10 anchors	





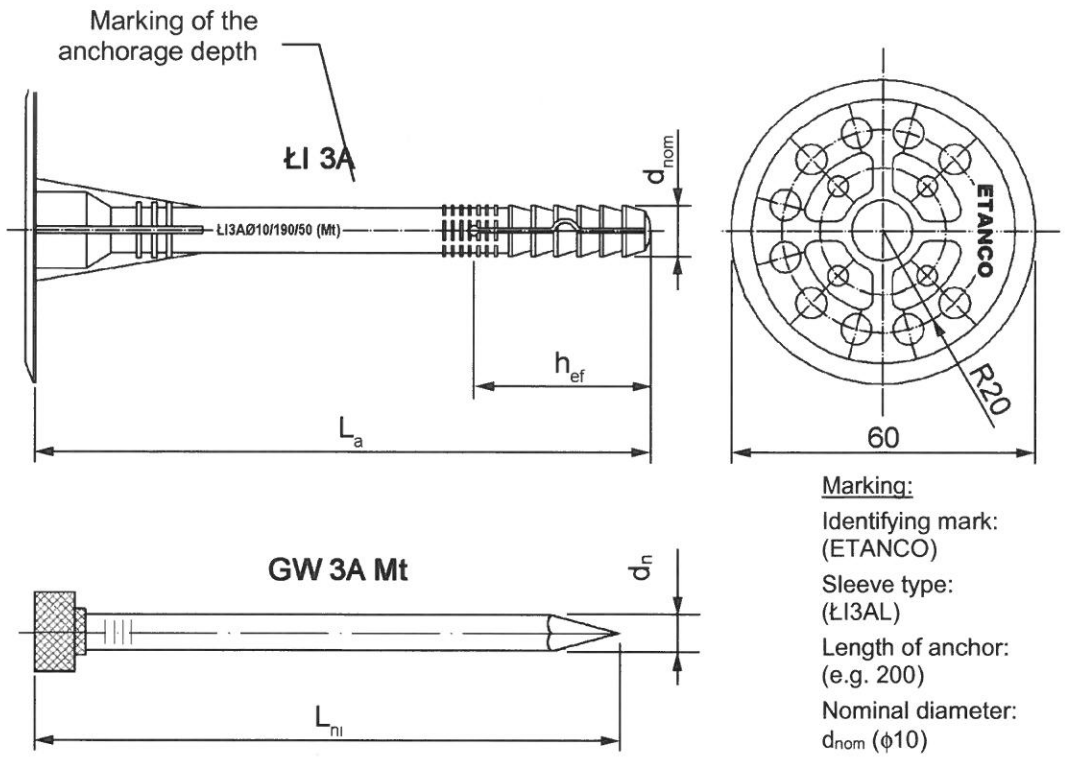
Marking:
Identifying mark:
(ETANCO)
Sleeve type:
(ŁI3A)
Length of anchor:
(e.g. 190)
Nominal diameter:
d_{nom} (ϕ10)

Table A2: ETANCO SUPER ISO II Φ10Mt anchor types and dimensions [mm]

Anchor type	Anchor sleeve				Expansion pin	
	d_{nom}	L_a	D	$h_{ef\ (AB)}$	d_n	L_n
SUPER ISOII/10/90	10	90	60	45	5,0	90
SUPER ISOII/10/110	10	110	60	45	5,0	110
SUPER ISOII/10/120	10	120	60	45	5,0	120
SUPER ISOII/10/135	10	135	60	45	5,0	135
SUPER ISOII/10/140	10	140	60	45	5,0	140
SUPER ISOII/10/150	10	150	60	45	5,0	150
SUPER ISOII/10/160	10	160	60	45	5,0	160
SUPER ISOII/10/170	10	170	60	45	5,0	170
SUPER ISOII/10/180	10	180	60	45	5,0	180
SUPER ISOII/10/190	10	190	60	45	5,0	190
SUPER ISOII/10/200	10	200	60	45	5,0	200
SUPER ISOII/10/220	10	220	60	45	5,0	220
SUPER ISOII/10/240	10	240	60	45	5,0	240
SUPER ISOII/10/260	10	260	60	45	5,0	260

$h_{ef\ (AB)}$ – for anchors in the base material category A and B
Determination of maximum thickness of insulation material: $h_D = L_a - t_{tol} - h_{ef}$

ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt	**Annex A3** of European Technical Assessment ETA-11/0280
Product description Marking and dimensions of the ETANCO SUPER ISO II Φ10Mt anchors	



Marking:

Identifying mark: (ETANCO)

Sleeve type: (ŁI3AL)

Length of anchor: (e.g. 200)

Nominal diameter: d_{nom} (ϕ10)

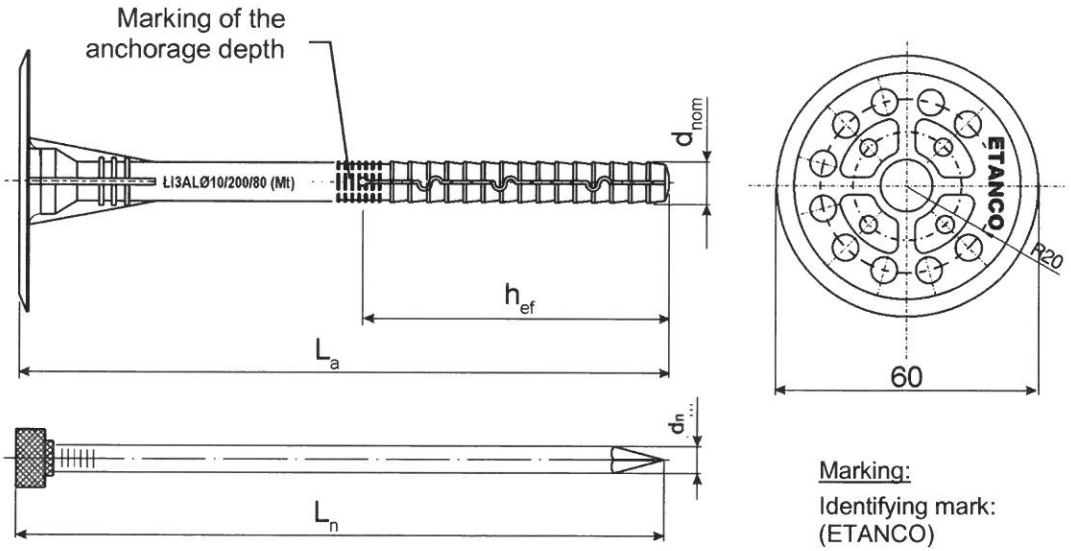
Table A3: ETANCO SUPER ISO II LONG Φ10 anchor types and dimensions [mm]

Anchor type	Anchor sleeve				Expansion pin	
	d_{nom}	L_a	D	$h_{ef\ (CDE)}$	d_n	L_n
SUPER ISO II LONG/10/160	10	160	60	80	5,0	160
SUPER ISO II LONG/10/180	10	180	60	80	5,0	180
SUPER ISO II LONG/10/200	10	200	60	80	5,0	200
SUPER ISO II LONG/10/220	10	220	60	80	5,0	220
SUPER ISO II LONG/10/260	10	260	60	80	5,0	260

$h_{ef\ (CDE)}$ – for anchors in the base material category C, D and E

Determination of maximum thickness of insulation material: $h_D = L_a - t_{tol} - h_{ef}$

ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt	**Annex A5** of European Technical Assessment ETA-11/0280
Product description Marking and dimensions of the ETANCO SUPER ISO II LONG Φ10 anchors	



Marking:

Identifying mark:
(ETANCO)

Sleeve type:
(ŁI3AL)

Length of anchor:
(e.g. 200)

Nominal diameter:
d_{nom} (ϕ10)

Table A4: ETANCO SUPER ISO II LONG Φ10Mt anchor types and dimensions [mm]

Anchor type	Anchor sleeve				Expansion pin	
	d_{nom}	L_a	D	$h_{ef\ (CDE)}$	d_n	L_n
SUPER ISO II LONG/10/160	10	160	60	80	5,0	160
SUPER ISO II LONG/10/180	10	180	60	80	5,0	180
SUPER ISO II LONG/10/200	10	200	60	80	5,0	200
SUPER ISO II LONG/10/220	10	220	60	80	5,0	220
SUPER ISO II LONG/10/260	10	260	60	80	5,0	260

$h_{ef\ (CDE)}$ – for anchors in the base material category C, D and E
Determination of maximum thickness of insulation material: $h_D = L_a - t_{tol} - h_{ef}$

ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt	**Annex A6** of European Technical Assessment ETA-11/0280
Product description Marking and dimensions of the ETANCO SUPER ISO II LONG Φ10Mt anchors	

Table A5: Materials

Designation	Material
Anchor sleeve ŁI3A and ŁI3AL	Virgin material: Polypropylene, white
Expansion pin GW3A	Glass fibre reinforced polyamide PA6 GF30, black
Expansion pin GW3AMt	Carbon steel ($f_{y,k} \geq 275$ MPa, $f_{u,k} \geq 310$ MPa), galvanized ≥ 5 µm according to EN ISO 4042, with head coating of polypropylene (colored)

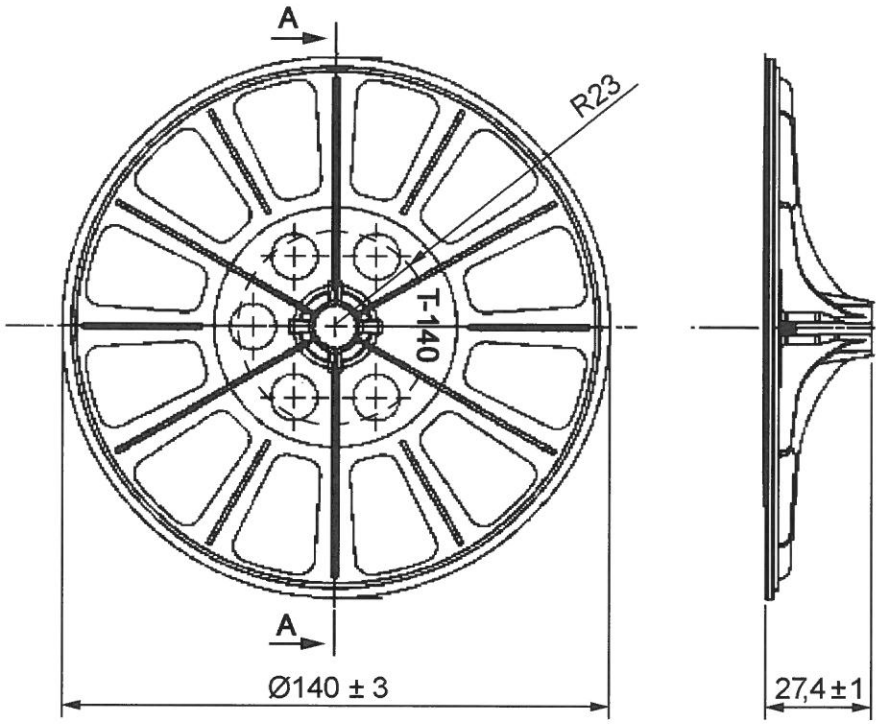


Table A6: Additional plate T-140

Plate type	Outer diameter [mm]	Material
T-140	140	Polyamide PA6, white or polypropylene, white

ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt	**Annex A8** of European Technical Assessment ETA-11/0280
Product description Additional plate T-140 used in combination with ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt anchor sleeve	

Specification of intended use

Anchorages subject to:

- Wind suction loads.
  Note: The anchor shall not be used for the transmission of dead loads of the external thermal insulation composite system.

Base materials:

- Reinforced or unreinforced normal weight concrete (use category A), according to Annex C1 and C4.
- Solid masonry (use category B), according to Annex C1 and C4.
- Hollow or perforated masonry (use category C), according to Annex C2 and C5.
- Lightweight aggregate concrete (use category D), according to Annex C2 and C5.
- Autoclaved aerated concrete (use category E), according to Annex C2 and C5.
- For other base materials of the use categories A, B, C, D or E the characteristic resistance of the anchor may be determined by job site tests according to EOTA Technical Report TR 051, edition December 2016.

Application 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 under the responsibility of an engineer experienced in anchorages and masonry work with the partial safety factors γ_M = 2,0 and γ_F = 1,5, if there are no other national regulations.
- Verifiable calculation notes and drawings with anchor positions are prepared taking into account of the loads to be anchored.
- Fasteners are only to be used for multiple fixings of thermal insulation composite system (ETICS).

Installation:

- Hole shall be drilled by the drill modes according to Annex C1 and C2.
- Anchor installation shall be carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- Installation shall be executed in temperature from 0°C to +40°C.
- Exposure to UV due to solar radiation of the anchor not protected by rendering shall not exceed 6 weeks.

ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt	**Annex B1** of European Technical Assessment ETA-11/0280
Intended use Specifications	

Table B1: Installation characteristics of ETANCO SUPER ISO II Φ10 and ETANCO SUPER ISO II Φ10Mt

Anchor type		ETANCO SUPER ISO II Φ10 and ETANCO SUPER ISO II Φ10Mt
Nominal diameter of drill bit	d_0 [mm]	10
Cutting diameter of drill bit	d_{cut} [mm]	≤ 10,45
Depth of drill hole for base material category A and B	h_1 [mm]	≥ 50
Effective anchorage depth for base material category A and B	h_{ef} [mm]	≥ 45

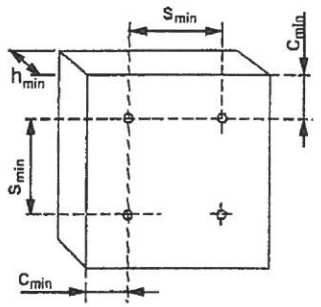
Table B2: Installation characteristics of ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt

Anchor type		ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt
Nominal diameter of drill bit	d_0 [mm]	10
Cutting diameter of drill bit	d_{cut} [mm]	≤ 10,45
Depth of drill hole for base material category C, D and E	h_1 [mm]	≥ 85
Effective anchorage depth for base material category C, D and E	h_{ef} [mm]	≥ 80

Table B3: Minimum thickness of base material, edge distance and spacing

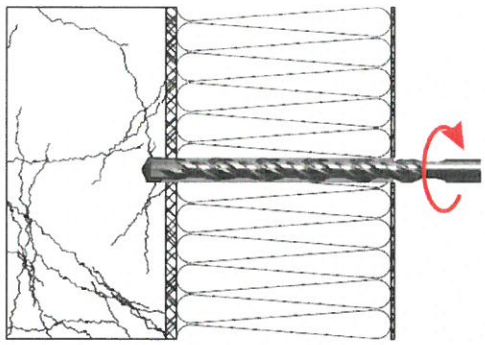
Anchor type		ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt
Minimum thickness of base material	h_{min} [mm]	100
Minimum spacing	s_{min} [mm]	100
Minimum edge distance	c_{min} [mm]	100

Diagram of spacing

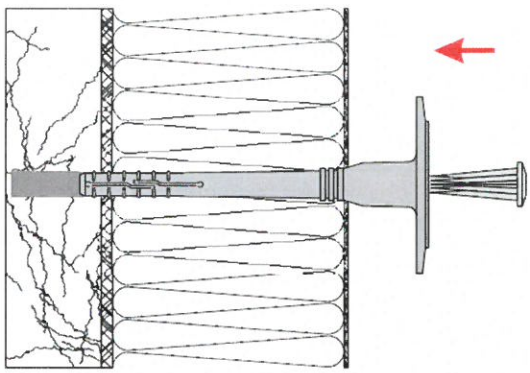


ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt	Annex B2 of European Technical Assessment ETA-11/0280
Intended use Installation characteristics, minimum thickness of base material, edge distance and spacing	

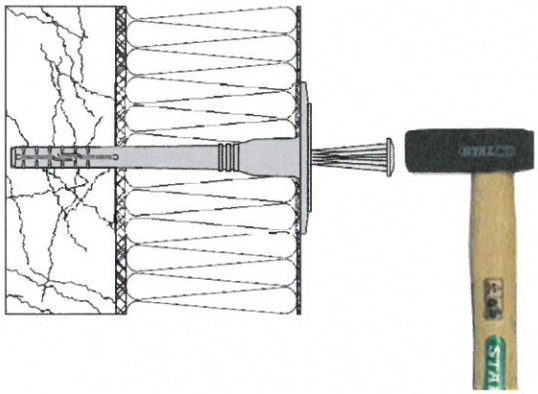
Installation instruction



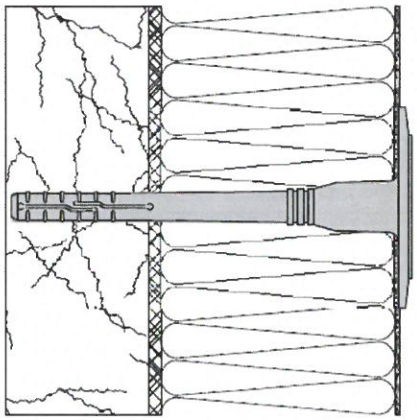
1. Drill the hole by corresponding drilling method acc. to Annex C1 and C2



2. Clean the hole and set-in the sleeve manually



3. Set expansion element by hammer strikes



4. Correctly installed anchor

ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt	**Annex B3** of European Technical Assessment ETA-11/0280
Intended use Installation instructions ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt anchors	

Table C1: Characteristic resistance to tension loads N_{Rk} in concrete and in masonry for single ETANCO SUPER ISO II Φ10 and ETANCO SUPER ISO II Φ10Mt anchors

Base material	Bulk density [kg/dm³]	Compressive strength [N/mm²]	Referring standard	N_{Rk} [kN]		Drill method
				ETANCO SUPER ISO II Φ10	ETANCO SUPER ISO II Φ10Mt	
Concrete C12/15 (use category A)			EN 206	0,25	0,30	hammer
Concrete C20/25 ÷ C50/60 (use category A)			EN 206	0,30	0,40	hammer
Clay bricks (use category B)	≥ 1,74	≥ 23,9	EN 771-1	0,30	0,40	hammer
Partial safety factor for anchor resistance, γ_M (1)	2,0					

(1) in the absence of the other national regulations

ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt	**Annex C1** of European Technical Assessment ETA-11/0280
Performances Characteristic resistance for ETANCO SUPER ISO II Φ10 and ETANCO SUPER ISO II Φ10Mt anchors	

Table C2: Characteristic resistance to tension loads N_{Rk} in concrete and in masonry for single ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt anchors

Base material	Bulk density [kg/dm³]	Compressive strength [N/mm²]	Referring standard	N_{Rk} [kN]		Drill method
				ETANCO SUPER ISO II LONG Φ10	ETANCO SUPER ISO II LONG Φ10Mt	
Horizontally perforated porosited blocks (use category C); the minimum wall thickness 12 mm	≥ 0,71	≥ 12,5	EN 771-1	0,30	0,30	rotary
Lightweight aggregate concrete solid blocks (use category D)	≥ 1,20	≥ 13,1	EN 771-3	0,50	0,60	rotary
Autoclaved aerated concrete blocks (use category E)	≥ 0,60	≥ 5,5	EN 771-4	0,40	0,50	rotary
Partial safety factor for anchor resistance, γ_M (1)	2,0					
(1) in the absence of the national regulations						

Table C3: Plate stiffness according to EOTA Technical Report TR 026

Anchor type	Diameter of the anchor plate d_{plate} [mm]	Characteristic load resistance of the anchor plate [kN]	Plate stiffness [kN/mm]
ETANCO SUPER ISO II Φ10, ETANCO SUPER ISO II Φ10Mt, ETANCO SUPER ISO II LONG Φ10 ETANCO SUPER ISO II LONG Φ10Mt	60	1,53	0,30

Table C4: Displacements for ETANCO SUPER ISO II Φ10 and ETANCO SUPER ISO II Φ10Mt anchors

Base material	Bulk density [kg/dm³]	Compressive strength [N/mm²]	$\frac{N_{Rk}}{3}$ [kN]		$\delta\left(\frac{N_{Rk}}{3}\right)$ [mm]	
			ETANCO SUPER ISO II Φ10	ETANCO SUPER ISO II Φ10Mt	ETANCO SUPER ISO II Φ10	ETANCO SUPER ISO II Φ10Mt
Concrete C12/15 (use category A)			0,08	0,10	0,20	0,20
Concrete C20/25 ÷ C50/60 (use category A)			0,10	0,13	0,40	0,30
Clay bricks (use category B)	≥ 1,74	≥ 23,9	0,10	0,13	0,40	0,30

Table C5: Displacements for ETANCO SUPER ISO II LONG Φ10 and ETANCO SUPER ISO II LONG Φ10Mt anchors

Base material	Bulk density [kg/dm³]	Compressive strength [N/mm²]	$\frac{N_{Rk}}{3}$ [kN]		$\delta\left(\frac{N_{Rk}}{3}\right)$ [mm]	
			ETANCO SUPER ISO II LONG Φ10	ETANCO SUPER ISO II LONG Φ10Mt	ETANCO SUPER ISO II LONG Φ10	ETANCO SUPER ISO II LONG Φ10Mt
Horizontally perforated porosited blocks (use category C); the minimum wall thickness 12 mm	≥ 0,71	≥ 12,5	0,10	0,10	0,50	0,30
Lightweight aggregate concrete solid blocks (use category D)	≥ 1,20	≥ 13,1	0,17	0,20	0,70	0,90
Autoclaved aerated concrete blocks (use category E)	≥ 0,60	≥ 5,5	0,13	0,17	0,60	0,80