

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-16/0509
of 9 February 2023

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Product family
to which the construction product belongs

Plastic anchor for fixing of external thermal insulation
composite systems with rendering

Manufacturer

Klimas Sp. z o.o.
Kuznica Kiedrzynska
ul. Wincentego Witosa 135/137
42-233 MYKANÓW
POLEN

Manufacturing plant

Plant 1, Plant 2 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

EAD 330196-01-0604 edition 10/2017

This version replaces

ETA-16/0509 issued on 17 August 2016

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Specific part

1 Technical description of the product

The nailed-in anchor LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10 consists of an anchor sleeve with an enlarged shaft, spreading zone subsequently, an insulation plate made of virgin polyethylene and an accompanying specific nail of steel with zinc coating for the type LMX and LGX and an accompanying specific nail of virgin polyamide for the type LTX. The serrated expanding part of the anchor sleeve is slotted.

The anchor may in addition be combined with the anchor plates TDX-P-90 / TDX-90 and TDX-P-140 / TDX-140.

The product description is given in Annex A.

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

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

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the anchor of at least 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, 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 Safety and accessibility in use (BWR 4)

| Essential characteristic | Performance |
|--|--|
| Characteristic load bearing capacity <ul style="list-style-type: none"> - Characteristic resistance under tension load - Minimum edge distance and spacing | See Annex C 1 and C 2 See Annex B 2 |
| Displacements | See Annex C 4 |
| Plate stiffness | See Annex C 2 |

3.2 Energy economy and heat retention (BWR 6)

| Essential characteristic | Performance |
|-----------------------------|---------------|
| Point thermal transmittance | See Annex C 2 |

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

In accordance with EAD No. 330196-01-0604, the applicable European legal act is: [97/463/EC].

The system to be applied is: 2+

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

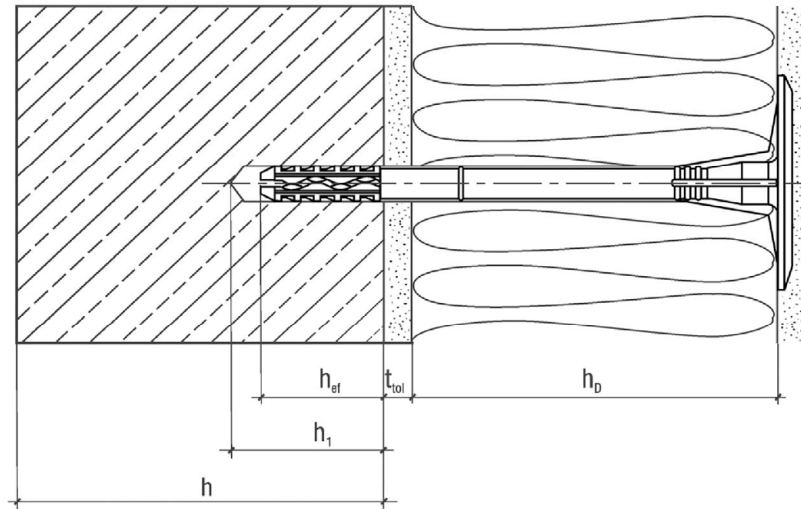
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 9 February 2023 by Deutsches Institut für Bautechnik

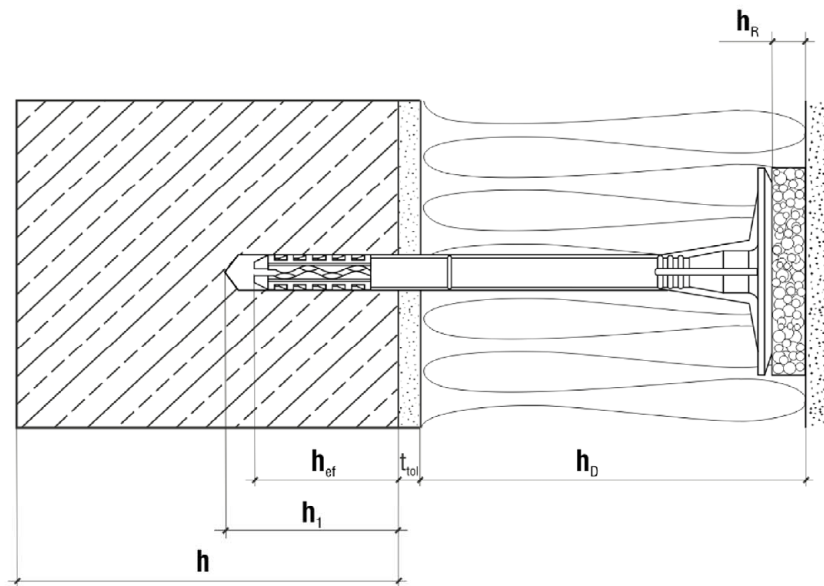
Dipl.-Ing. Beatrix Wittstock
Head of Section

beglaubigt:
Ziegler

LTX-8 / LMX-8 / LGX-8 / LTX-10 / LMX-10 / LGX-10



surface mount



immersed mount

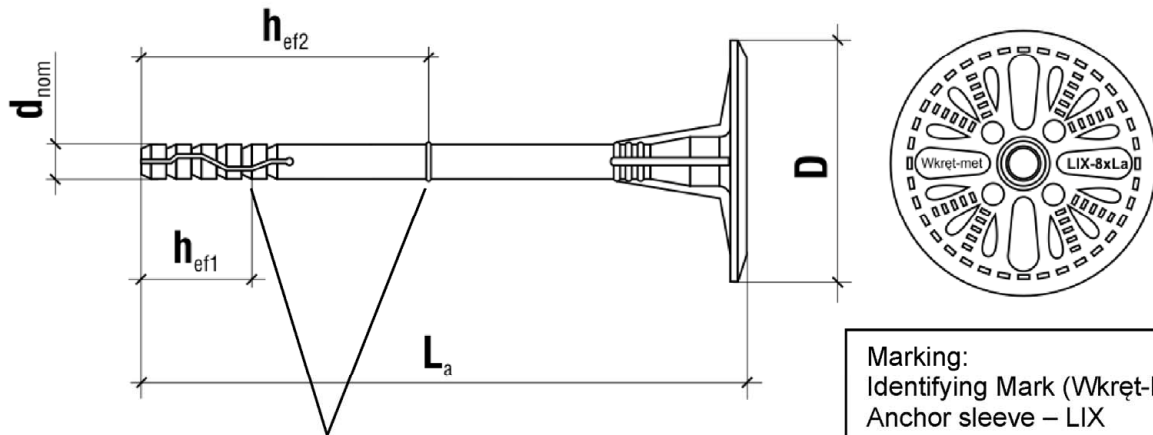
- Legend:
- h_D = thickness of insulation material
 - h_{ef} = effective anchorage depth
 - h = thickness of member (wall)
 - h_1 = depth of drilled hole to deepest point
 - t_{tol} = thickness of equalizing layer or non-load-bearing coating
 - h_R = thickness of insulation cover

LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Product description
Installed condition – surface mount, immersed mount

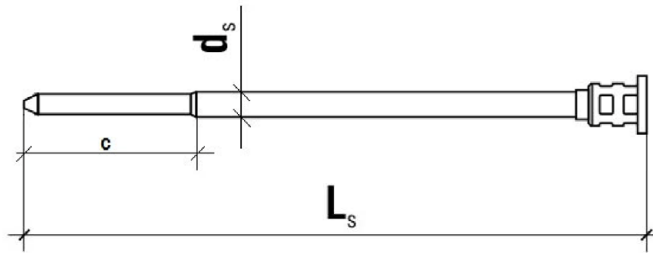
Annex A 1

LTX-8



Marking of effective anchorage depth

Marking:
Identifying Mark (Wkret-Met)
Anchor sleeve – LIX
Anchor size – 8xLa



Accompanying specific nail TTX-4,8

Table A1: Dimensions

| Anchor Type | Colour | Anchor Sleeve | | | Specific nail | | |
|-------------|---------|-------------------|------------------------------------|--------------------------------|---------------|-------------|--------------------------------|
| | | d_{nom} [mm] | h_{ef} [mm] | min L_a max L_a [mm] | d_s [mm] | c [mm] | min L_s max L_s [mm] |
| LTX-8 | natural | 8 | $h_{ef1} = 25$ $h_{ef2} = 65^*$ | 95 195 | 4,8 | 44 | 100 200 |

*) for base material group E

Determination of maximum thickness of insulation h_D [mm] for LTX-8:

$$h_D = L_a - t_{tol} - h_{ef} \quad (L_a = \text{e.g. } 95; t_{tol} = 10)$$

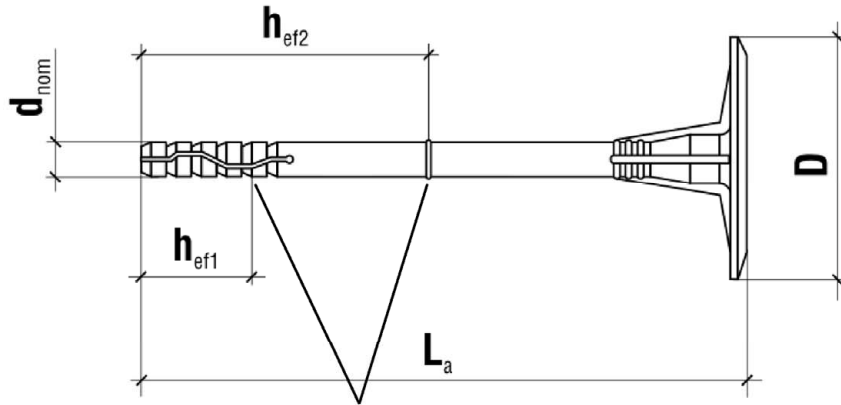
e.g. $h_D = 95 - 10 - 25$
 $h_{Dmax} = 60$

LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

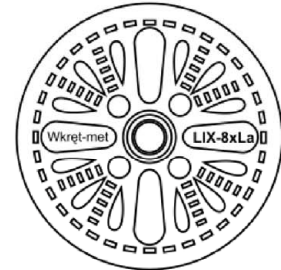
Product description
LTX-8 - marking and dimension of the anchor sleeve LIX
Expansion element TTX

Annex A 2

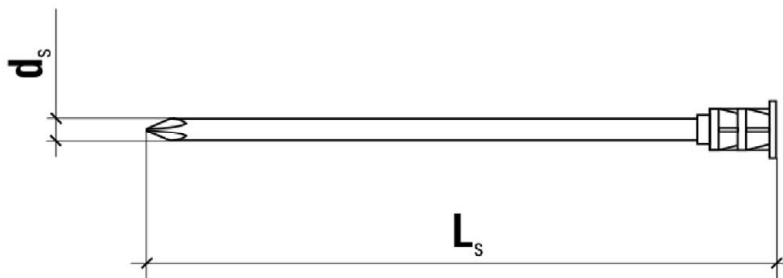
LMX-8



Marking of effective anchorage depth



Marking:
Identifying Mark (Wkret-Met)
Anchor sleeve – LIX
Anchor size – 8xLa



Accompanying specific nail TMX-4,4

Table A2: Dimensions

| Anchor Type | Colour | Anchor Sleeve | | | Specific nail | |
|-------------|---------|-------------------|------------------------------------|--------------------------------|---------------|--------------------------------|
| | | d_{nom} [mm] | h_{ef} [mm] | min L_a max L_a [mm] | d_s [mm] | min L_s max L_s [mm] |
| LMX-8 | natural | 8 | $h_{ef1} = 25$ $h_{ef2} = 65^*$ | 95 295 | 4,4 | 100 300 |

*) for base material group E

Determination of maximum thickness of insulation h_D [mm] for LMX-8:

$$h_D = L_a - t_{tol} - h_{ef} \quad (L_a = \text{e.g. } 95; t_{tol} = 10)$$

e.g. $h_D = 95 - 10 - 25 = 60$

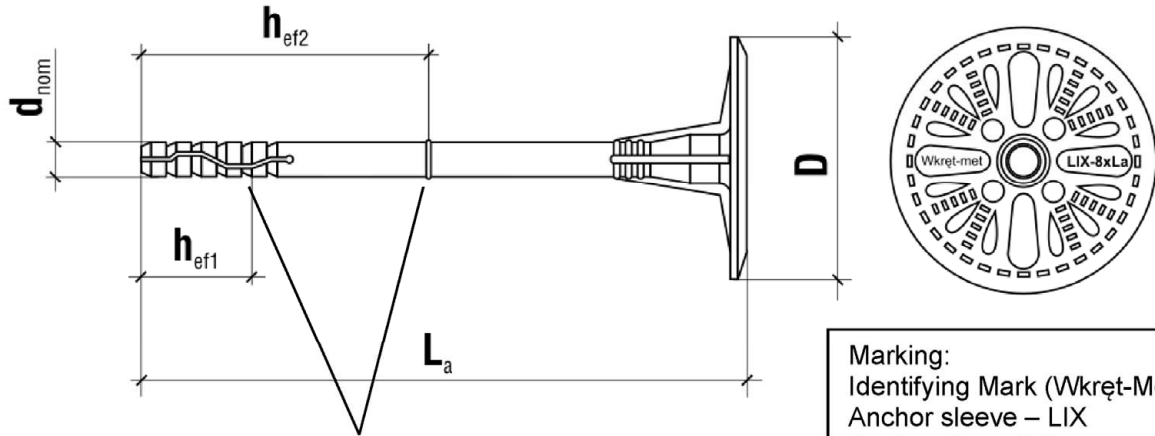
LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Product description

LMX-8 - marking and dimension of the anchor sleeve LIX
Expansion element TMX

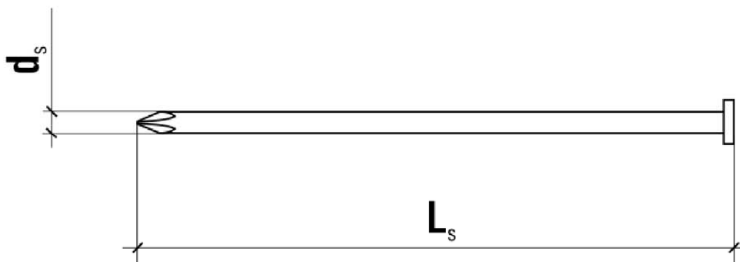
Annex A 3

LGX-8



Marking of effective anchorage depth

Marking:
Identifying Mark (Wkręć-Met)
Anchor sleeve – LIX
Anchor size – 8xLa



Accompanying specific nail TGX-4,4

Table A3: Dimensions

| Anchor Type | Colour | Anchor Sleeve | | | Specific nail | |
|-------------|---------|-------------------|------------------------------------|--------------------------------|---------------|--------------------------------|
| | | d_{nom} [mm] | h_{ef} [mm] | min L_a max L_a [mm] | d_s [mm] | min L_s max L_s [mm] |
| LGX-8 | natural | 8 | $h_{ef1} = 25$ $h_{ef2} = 65^*$ | 95 295 | 4,4 | 100 300 |

*) for base material group E

Determination of maximum thickness of insulation h_D [mm] for LGX-8:

$$h_D = L_a - t_{tol} - h_{ef} \quad (L_a = \text{e.g. } 95; t_{tol} = 10)$$

e.g. $h_D = 95 - 10 - 25$
 $h_{Dmax} = 60$

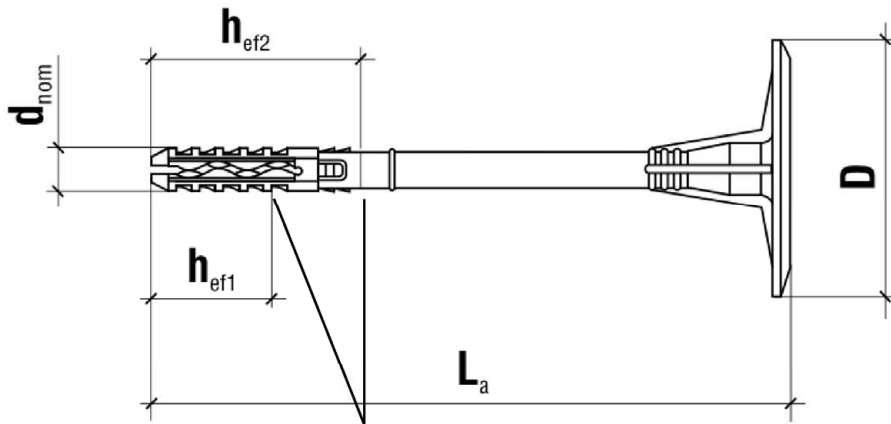
LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Annex A 4

Product description

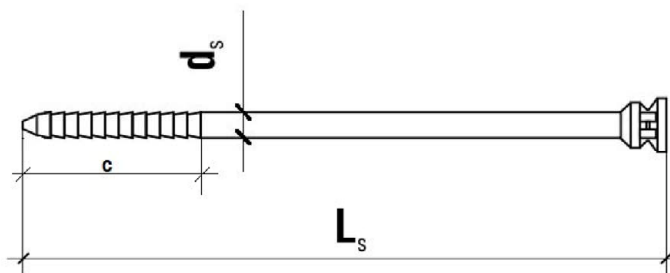
LGX-8 - marking and dimension of the anchor sleeve LIX
Expansion element TGX

LTX-10



Marking:
Identifying Mark (Wkręć-Met)
Anchor sleeve – LIX
Anchor size – 10xLa

Marking of effective anchorage depth



Accompanying specific nail TTX-5,5

Table A4: Dimensions

| Anchor Type | Colour | Anchor Sleeve | | | Specific nail | | |
|-------------|---------|-------------------|------------------------------------|--------------------------------|---------------|-------------|--------------------------------|
| | | d_{nom} [mm] | h_{ef} [mm] | min L_a max L_a [mm] | d_s [mm] | c [mm] | min L_s max L_s [mm] |
| LTX-10 | natural | 10 | $h_{ef1} = 30$ $h_{ef2} = 50^*$ | 70 260 | 5,5 | 44 | 75 265 |

*) for base material group E

Determination of maximum thickness of insulation h_D [mm] for LTX-10:

$$h_D = L_a - t_{tol} - h_{ef} \quad (L_a = \text{e.g. } 70; t_{tol} = 10)$$

e.g. $h_D = 70 - 10 - 30$

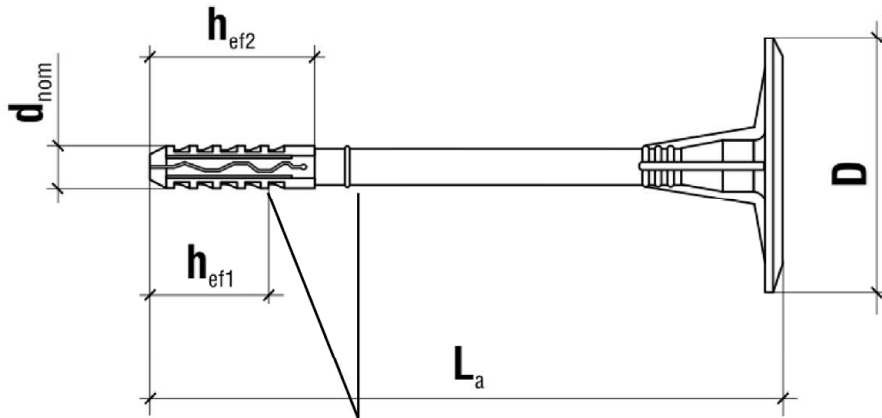
$$h_{Dmax} = 30$$

LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Product description
LTX-10 - marking and dimension of the anchor sleeve LIX
Expansion element TTX

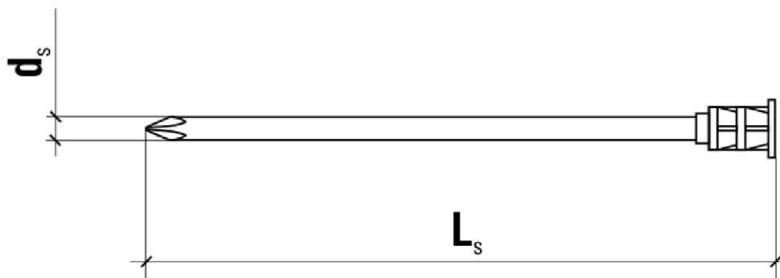
Annex A 5

LMX-10



Marking:
Identifying Mark (Wkręć-Met)
Anchor sleeve – LMX
Anchor size – 10xLa

Marking of effective anchorage depth



Accompanying specific nail TMX-4,4

Table A5: Dimensions

| Anchor Type | Colour | Anchor Sleeve | | | Specific nail | |
|-------------|---------|-------------------|------------------------------------|--------------------------------|---------------|--------------------------------|
| | | d_{nom} [mm] | h_{ef} [mm] | min L_a max L_a [mm] | d_s [mm] | min L_s max L_s [mm] |
| LMX-10 | natural | 10 | $h_{ef1} = 30$ $h_{ef2} = 50^*$ | 70 300 | 4,4 | 70 300 |

*) for base material group E

Determination of maximum thickness of insulation h_D [mm] for LMX-10:

$$h_D = L_a - t_{tol} - h_{ef} \quad (L_a = \text{e.g. } 70; t_{tol} = 10)$$

e.g. $h_D = 70 - 10 - 30$
 $h_{Dmax} = 30$

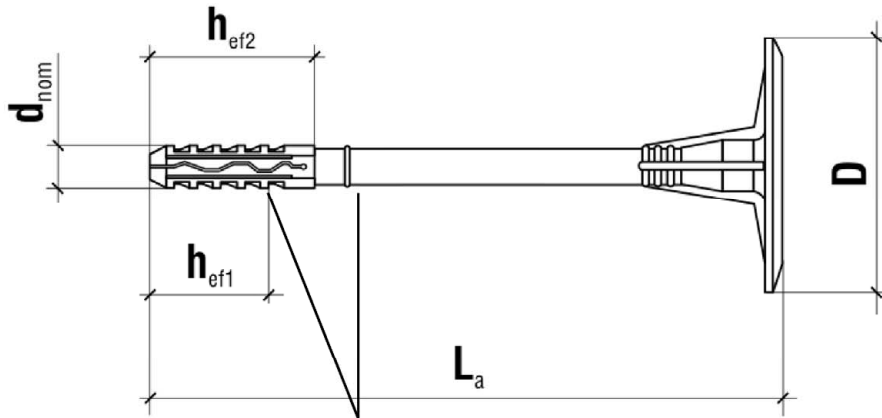
LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Annex A 6

Product description

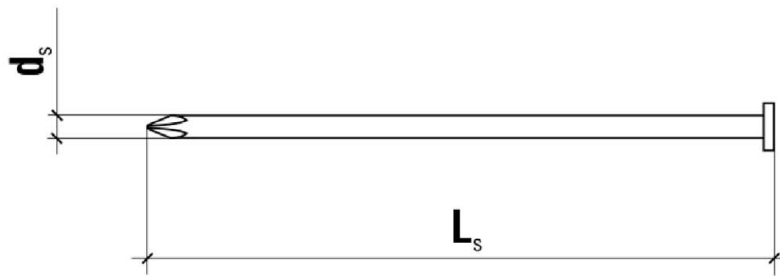
LMX-10 - marking and dimension of the anchor sleeve LMX
Expansion element TMX

LGX-10



Marking:
Identifying Mark (Wkręć-Met)
Anchor sleeve – LMX
Anchor size – 10xLa

Marking of effective anchorage depth



Accompanying specific nail TGX-4,4

Table A6: Dimensions

| Anchor Type | Colour | Anchor Sleeve | | | Specific nail | |
|-------------|---------|-------------------|------------------------------------|--------------------------------|---------------|--------------------------------|
| | | d_{nom} [mm] | h_{ef} [mm] | min L_a max L_a [mm] | d_s [mm] | min L_s max L_s [mm] |
| LGX-10 | natural | 10 | $h_{ef1} = 30$ $h_{ef2} = 50^*$ | 70 300 | 4,4 | 70 300 |

*) for base material group E

Determination of maximum thickness of insulation h_D [mm] for LGX-10:

$$h_D = L_a - t_{tol} - h_{ef} \quad (L_a = \text{e.g. } 70; t_{tol} = 10)$$

e.g. $h_D = 70 - 10 - 30$
 $h_{Dmax} = 30$

LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Product description
LGX-10 - marking and dimension of the anchor sleeve LMX
Expansion element TGX

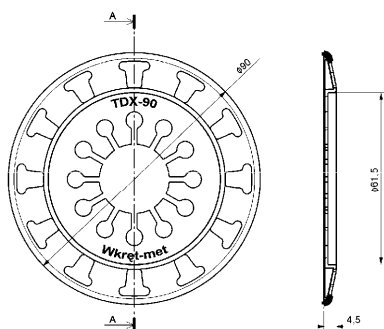
Annex A 7

Table A7: Materials

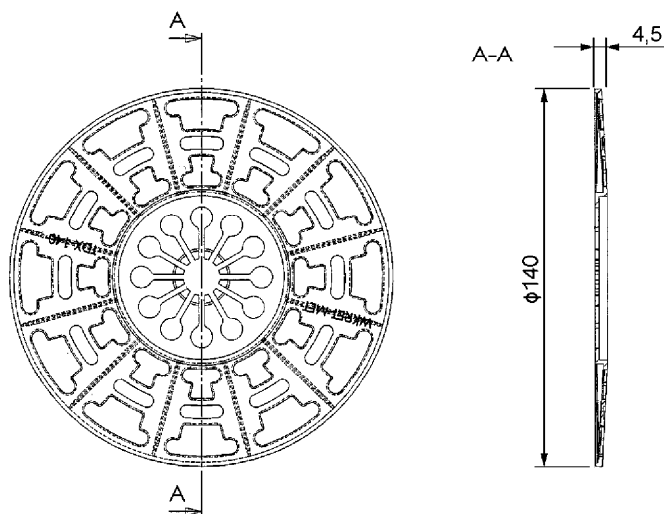
| | |
|------------------------|--|
| Name | Materials |
| Anchor sleeve | Polyethylene (virgin material), colour: natural |
| Specific nail TTX | Polyamide (virgin material) GF, colour: black or natural |
| Specific nail TMX, TGX | Steel with zinc coating $\geq 5 \mu\text{m}$ |

Table A8: Insulation discs, diameters and material

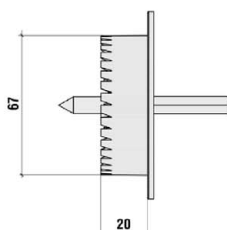
| Plate type | Outer diameter [mm] | Material |
|------------|---------------------|---------------------------------|
| TDX-P-90 | 90 | Polyethylene, natural or grey |
| TDX-90 | 90 | Polyamide (GF), natural or grey |
| TDX-P-140 | 140 | Polyethylene, natural or grey |
| TDX-140 | 140 | Polyamide (GF), natural or grey |



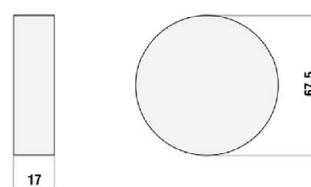
TDX-P-90/TDX-90



TDX-P-140/TDX-140



Special drill tool WK-FT for immersed installation



Insulation cover KS and KSG

LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Product description

Materials,
Slip on plates with LTX-8 / LMX-8 / LGX-8 / LTX-10 / LMX-10 / LGX-10

Annex A 8

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:

- Compacted normal weight concrete without fibres (base material group A) according to Annex C 1
- Solid masonry (base material group B), according to Annex C 1
- Hollow or perforated masonry (base material group C), according to Annex C 1
- Lightweight aggregate concrete (base material group D), according to Annex C 1
- autoclaved aerated concrete (base material group E), according to Annex C 1
- For other base materials of the base material groups 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 April 2018.

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 $\gamma_M = 2,0$ and $\gamma_F = 1,5$ in absence of other national regulations.
- 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 of ETICS.

Installation:

- Hole drilling by the drill modes according to Annex C 1
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of 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

LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Intended use
Specifications

Annex B 1

Table B1: Installation parameters for LTX-8 / LMX-8 / LGX-8

| | | A B C D | E |
|--------------------------------------|------------------|---------|------|
| Base material group | | A B C D | E |
| Drill hole diameter | d_0 [mm] = | 8 | 8 |
| Cutting diameter of drill bit | d_{cut} [mm] ≤ | 8,45 | 8,45 |
| Depth of drill hole to deepest point | h_1 [mm] ≥ | 35 | 75 |
| Embedment depth in the base material | h_{ef} [mm] ≥ | 25 | 65 |

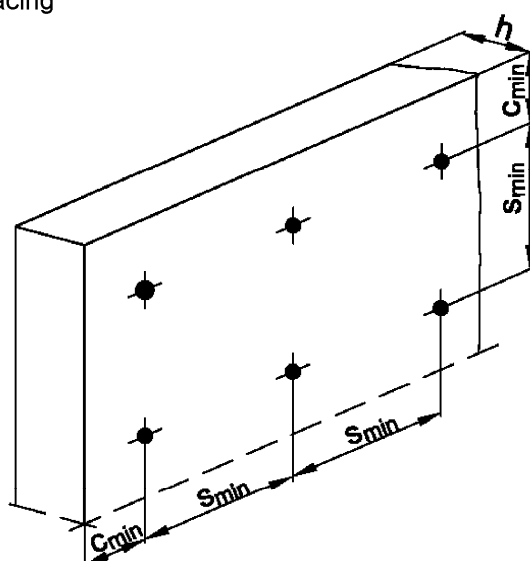
Table B2: Installation parameters for LTX-10 / LMX-10 / LGX-10

| | | A B C D | E |
|--|------------------|---------|-------|
| Base material group | | A B C D | E |
| Drill hole diameter | d_0 [mm] = | 10 | 10 |
| Cutting diameter of drill bit | d_{cut} [mm] ≤ | 10,45 | 10,45 |
| Depth of drilled hole to deepest point | h_1 [mm] ≥ | 40 | 60 |
| Embedment depth in the base material | h_{ef} [mm] ≥ | 30 | 50 |

Table B3: Anchor distances and dimensions of members

| | | |
|-----------------------------|---------------------|-----|
| Minimum spacing | $s_{min} \geq$ [mm] | 100 |
| Minimum edge distance | $c_{min} \geq$ [mm] | 100 |
| Minimum thickness of member | $h \geq$ [mm] | 100 |

Scheme of distance and spacing



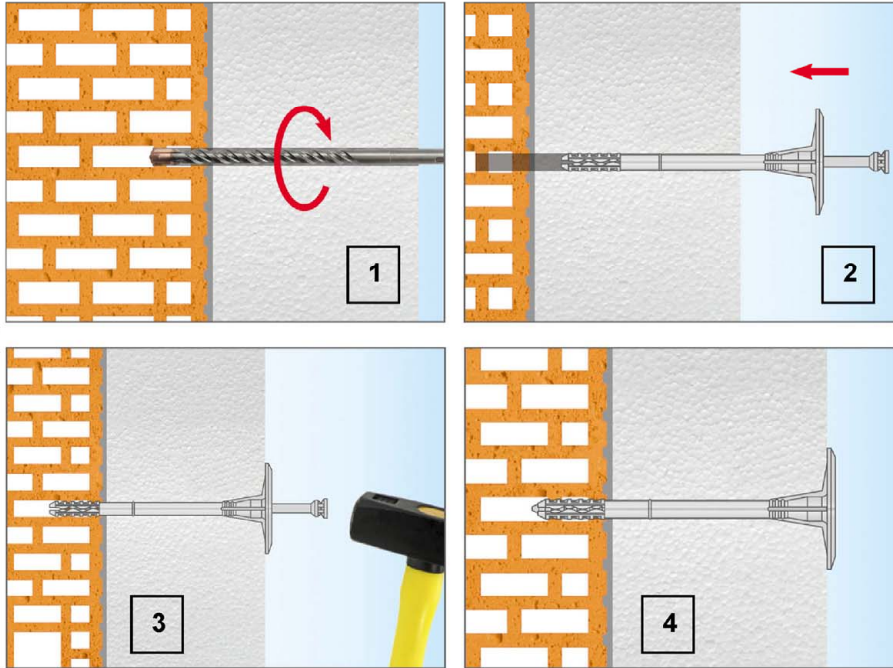
LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Intended use
Installation parameters,
Edge distances and spacing

Annex B 2

Installation instructions

surface mount



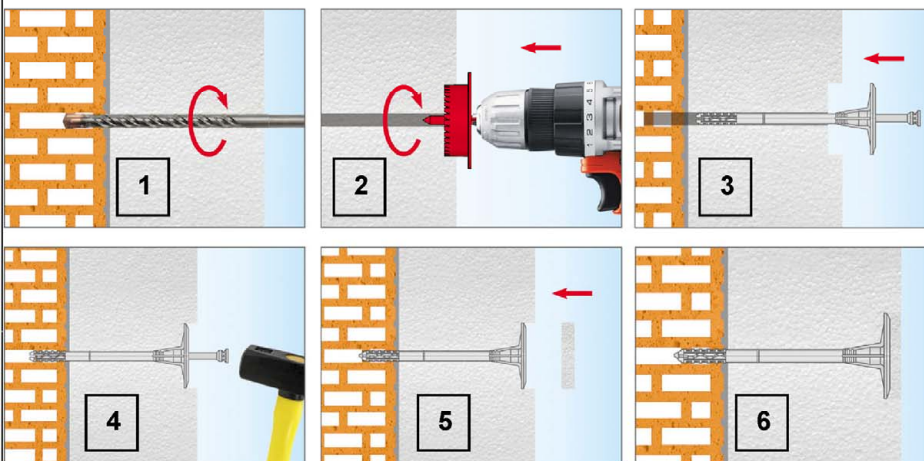
1) Drill the hole perpendicular to the substrate surface. Clean the drill hole.

2) Place the anchor into the drill hole. The bottom side of the plate must be flush with the ETICS.

3) Drive in the specific nail with the hammer.

4) Installed condition.

immersed mount



1) Drill the hole perpendicular to the substrate surface. Clean the drill hole.

2) Drill the recess for immersed installation with the special drilling tool WK-FT.

3) Place the anchor into the drill hole. The bottom side of the plate must be flush with the recess in the ETICS.

4) Drive in the specific nail with the hammer.

5) Insert the insulation cover.

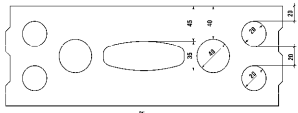
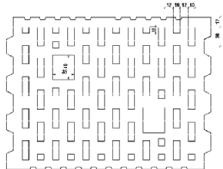
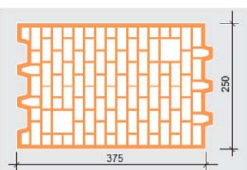
6) Installed condition.

LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Intended use

Installation instructions – surface mount, immersed mount

Annex B 3

| Table C1: Characteristic resistance to tension loads N_{Rk} in concrete and masonry for a single anchor | | | | | | |
|---|---|---|---|--------------|------------------|----------------|
| Anchor type | | | | | LTX-8 | LMX-8 LGX-8 |
| Base materials | Bulk density ρ [kg/dm ³] | compressive strength f_b [N/mm ²] | General remarks | Drill method | N_{Rk} [kN] | N_{Rk} [kN] |
| Concrete C12/15 as per EN 206:2013+A1:2016 | - | - | Concrete without fibres | hammer | 0,5 | 0,5 |
| Concrete C16/20 - C50/60 as per EN 206:2013+A1:2016 | - | - | Concrete without fibres | hammer | 0,75 | 0,75 |
| Clay bricks MZ as per EN 771-1:2011+A1:2015 | $\geq 2,0$ | ≥ 20 | | hammer | 0,75 | 0,75 |
| Calcium silicate bricks KS as per EN 771-2:2011+A1:2015 | $\geq 2,0$ | ≥ 20 | | hammer | 0,75 | 0,75 |
| Calcium silicate hollow block KSL as per EN 771-2:2011+A1:2015  | $\geq 1,6$ | ≥ 12 | Cross section > 15 % and \leq 50 % reduced by vertical perforation Exterior web thickness \geq 20 mm | hammer | 0,75 | 0,75 |
| Vertically perforated clay bricks HLZ as per EN 771-1:2011+A1:2015  | $\geq 1,2$ | ≥ 12 | Cross section > 15 % and \leq 50 % reduced by vertical perforation Exterior web thickness \geq 12 mm | rotary | 0,6 | 0,6 |
| Vertically perforated clay bricks porotherm 25 as per EN 771- 1:2011+A1:2015  | $\geq 0,8$ | ≥ 10 | Cross section > 15 % and \leq 50 % reduced by vertical perforation Exterior web thickness \geq 10 mm | rotary | 0,4 | 0,4 |
| Autoclaved concrete blocks as per EN 771-4:2011+A1:2015 | $\geq 0,35$ | ≥ 2 | | rotary | 0,75 | 0,75 |
| Autoclaved concrete blocks as per EN 771-4:2011+A1:2015 | $\geq 0,65$ | $\geq 3,5$ | | rotary | 0,9 | 0,9 |
| Lightweight concrete blocks LAC as per EN 1520:2011 / EN 771- 3:2011+A1:2015 | $\geq 0,88$ | ≥ 5 | | rotary | 0,6 | 0,75 |
| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10 | | | | | Annex C 1 | |
| Performances Characteristic resistance LTX-8, LMX-8, LGX-8 | | | | | | |

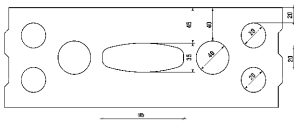
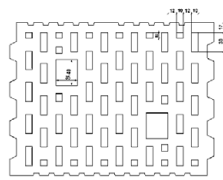
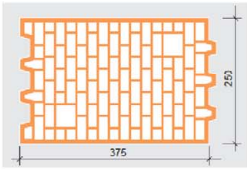
| Table C2: Characteristic resistance to tension loads N_{Rk} in concrete and masonry for a single anchor | | | | | | |
|---|---|---|---|--------------|------------------|------------------|
| Anchor type | | | | | LTX-10 | LMX-10 LGX-10 |
| Base materials | Bulk density ρ [kg/dm ³] | Compressive strength f_b [N/mm ²] | General remarks | Drill method | N_{Rk} [kN] | N_{Rk} [kN] |
| Concrete C12/15 as per EN 206:2013+A1:2016 | - | - | Concrete without fibres | hammer | 0,5 | 0,75 |
| Concrete C16/20 - C50/60 as per EN 206:2013+A1:2016 | - | - | Concrete without fibres | hammer | 0,75 | 0,9 |
| Clay bricks MZ as per EN 771-1:2011+A1:2015 | $\geq 2,0$ | ≥ 20 | | hammer | 0,75 | 0,9 |
| Calcium silicate bricks KS as per EN 771-2:2011+A1:2015 | $\geq 2,0$ | ≥ 20 | | hammer | 0,6 | 0,9 |
| Calcium silicate hollow block KSL as per EN 771-2:2011+A1:2015  | $\geq 1,6$ | ≥ 12 | Cross section > 15 % and \leq 50 % reduced by vertical perforation Exterior web thickness ≥ 20 mm | hammer | 0,6 | 0,9 |
| Vertically perforated clay bricks HLZ as per EN 771-1:2011+A1:2015  | $\geq 1,2$ | ≥ 12 | Cross section > 15 % and \leq 50 % reduced by vertical perforation Exterior web thickness ≥ 12 mm | rotary | 0,6 | 0,9 |
| Vertically perforated clay bricks porotherm 25 as per EN 771-1:2011+A1:2015  | $\geq 0,8$ | ≥ 10 | Cross section > 15 % and \leq 50 % reduced by vertical perforation Exterior web thickness ≥ 10 mm | rotary | 0,4 | 0,5 |
| Autoclaved concrete blocks as per EN 771-4:2011+A1:2015 | $\geq 0,35$ | ≥ 2 | | rotary | 0,5 | 0,75 |
| Autoclaved concrete blocks as per EN 771-4:2011+A1:2015 | $\geq 0,65$ | $\geq 3,5$ | | rotary | 0,6 | 0,9 |
| Lightweight concrete blocks LAC as per EN 1520:2011 / EN 771-3:2011+A1:2015 | $\geq 0,88$ | ≥ 5 | | rotary | 0,6 | 0,9 |
| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10 | | | | | Annex C 2 | |
| Performances Characteristic resistance LTX-10, LMX-10, LGX-10 | | | | | | |

Table C3: Point thermal transmittance according EOTA Technical Report TR 025:2016-05

| anchor type | insulation thickness h_D [mm] | point thermal transmittance χ [W/K] |
|-----------------------|---------------------------------------|--|
| LTX-8 surface mount | 60 - 160 | 0 |
| LTX-8 immersed mount | 80 - 160 | 0 |
| LMX-8 surface mount | 60 - 260 | 0,004 |
| LMX-8 immersed mount | 80 - 260 | 0,002 |
| LGX-8 surface mount | 60 - 260 | 0,006 |
| LGX-8 immersed mount | 80 - 260 | 0,003 |
| LTX-10 surface mount | 30 - 220 | 0,001 |
| LTX-10 immersed mount | 50 - 220 | 0 |
| LMX-10 surface mount | 30 - 260 | 0,004 |
| LMX-10 immersed mount | 50 - 260 | 0,002 |
| LGX-10 surface mount | 30 - 260 | 0,007 |
| LGX-10 immersed mount | 50 - 260 | 0,003 |

Table C4: Plate stiffness according EOTA Technical Report TR 026:2016-05

| anchor type | diameter of the anchor plate [mm] | load resistance of the anchor plate [kN] | plate stiffness [kN/mm] |
|----------------------|---|--|----------------------------|
| LTX-8/LMX-8/LGX-8 | 60 | 1,09 | 0,5 |
| LTX-10/LMX-10/LGX-10 | 60 | 1,02 | 0,5 |

LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Performances

Point thermal transmittance, plate stiffness

Annex C 3

Table C5: Displacements LTX-8 and LTX-10

| Base materials (refer Table C1, C2) | Bulk density ρ [kg/dm ³] | Compressive strength f_b [N/mm ²] | Tension load N [kN] | | Displacements $\Delta\delta_N$ [mm] | |
|--|---|--|---------------------------|--------|---|--------|
| | | | LTX-8 | LTX-10 | LTX-8 | LTX-10 |
| Concrete C20/25 | ≥ 2,25 | ≥ 30 | 0,17 | 0,17 | 1,5 | 1,4 |
| Concrete C50/60 | ≥ 2,30 | ≥ 65 | 0,25 | 0,25 | 1,5 | 1,8 |
| Clay bricks MZ | ≥ 2,0 | ≥ 20 | 0,25 | 0,25 | 0,5 | 0,6 |
| Calcium silicate bricks KS | ≥ 2,0 | ≥ 20 | 0,25 | 0,2 | 0,8 | 1,1 |
| Calcium silicate hollow block KSL | ≥ 1,6 | ≥ 12 | 0,25 | 0,2 | 1,0 | 1,5 |
| Vertically perforated clay bricks HLZ | ≥ 1,2 | ≥ 12 | 0,2 | 0,2 | 1,2 | 1,4 |
| Perforated clay bricks porotherm 25 | ≥ 0,8 | ≥ 10 | 0,13 | 0,13 | 0,6 | 0,5 |
| Autoclaved concrete blocks | ≥ 0,35 | ≥ 2 | 0,25 | 0,17 | 0,8 | 1,3 |
| Autoclaved concrete blocks | ≥ 0,65 | ≥ 3,5 | 0,3 | 0,2 | 1,3 | 1,8 |
| Lightweight concrete blocks LAC | ≥ 0,88 | ≥ 5 | 0,2 | 0,2 | 0,9 | 1,5 |

Table C6: Displacements LMX-8/LGX-8 and LMX-10/LGX-10

| Base materials (refer Table C1, C2) | Bulk density ρ [kg/dm ³] | Compressive strength f_b [N/mm ²] | Tension load N [kN] | | Displacements $\Delta\delta_N$ [mm] | |
|--|---|--|---------------------------|-------------------|---|-------------------|
| | | | LMX-8/ LGX-8 | LMX-10/ LGX-10 | LMX-8/ LGX-8 | LMX-10/ LGX-10 |
| Concrete C20/25 | ≥ 2,25 | ≥ 30 | 0,17 | 0,25 | 2,1 | 1,3 |
| Concrete C50/60 | ≥ 2,30 | ≥ 65 | 0,25 | 0,3 | 2,4 | 1,5 |
| Clay bricks MZ | ≥ 2,0 | ≥ 20 | 0,25 | 0,3 | 2,0 | 0,8 |
| Calcium silicate bricks KS | ≥ 2,0 | ≥ 20 | 0,25 | 0,3 | 0,7 | 1,0 |
| Calcium silicate hollow block KSL | ≥ 1,6 | ≥ 12 | 0,25 | 0,3 | 1,0 | 1,3 |
| Vertically perforated clay bricks HLZ | ≥ 1,2 | ≥ 12 | 0,2 | 0,3 | 1,6 | 1,7 |
| Perforated clay bricks porotherm 25 | ≥ 0,8 | ≥ 10 | 0,13 | 0,17 | 0,9 | 0,8 |
| Autoclaved concrete blocks | ≥ 0,35 | ≥ 2 | 0,25 | 0,25 | 2,7 | 2,4 |
| Autoclaved concrete blocks | ≥ 0,65 | ≥ 3,5 | 0,3 | 0,3 | 2,0 | 1,4 |
| Lightweight concrete blocks LAC | ≥ 0,88 | ≥ 5 | 0,25 | 0,3 | 1,0 | 1,0 |

LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Performances
Displacements

Annex C 4