

# KI-10 Facade fixing with plastic pin

## Hammerset insulation fixing with reinforced plastic nail



## Approvals and Reports

- ETA-07/0291



## Product information

### Features and benefits

- Installation in all substrates (categories A,B,C,D,E).
- The plastic nail reduces heat transmission (value 0.0W/K)
- Plastic nail reinforced with glass fibre allows fast and trouble-free installation with correct expansion of the plug.
- Expansion zone designed for low embedment depths, reducing the amount of drilling required.
- Can be used with additional KWL insulation holding plate, available in 90, 110 and 140mm flange sizes (recommended for soft insulation materials such as mineral wool).
- Optimal product parameters enable cost-saving solutions.
- Optimum plate stiffness ensures stability and excellent pull-over values

### Applications

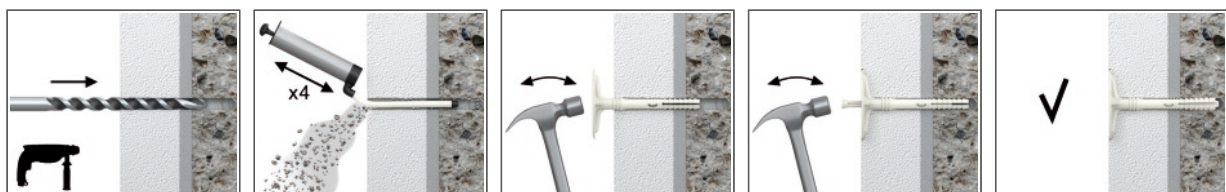
- Polystyrene boards
- Mineral wool (MW) boards
- Light wood wool building boards
- Polyurethane boards
- Wood fibre boards
- Lightweight recycled panels
- External Thermal Insulation Composite Systems (ETICS)

### Base materials

#### Approved for use in:

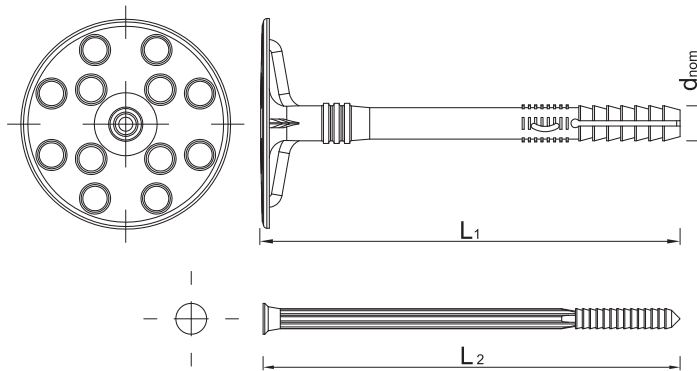
- Concrete C12/15-C50/60 (Use category A)
- Solid Brick (Use category B)
- Solid Sand-lime Brick (Use category B)
- Hollow Sand-lime Brick (Use category C)
- Vertically-perforated clay block (Use category C)
- Hollow Lightweight Concrete Block (Use category D)
- Lightweight Concrete Block (Use category C)
- Reinforced components of lightweight aggregate concrete (Use category D)
- Aerated Concrete Block (Use category D)

## Installation guide



1. Drill a hole of required diameter and depth
2. Drilling depth of min 35 in masonry, 50mm in perforated materials and 70mm in lightweight concrete block and aerated concrete
3. Lightly tap the plastic sleeve through the insulation material into hole with a hammer, until fixing depth is reached
4. Embedment depth of min 25 in masonry, 40mm in perforated materials and 60mm in lightweight concrete block and aerated concrete
5. Lightly tap the plastic nail into the plastic sleeve until fixing is secure and flush with insulation material.

Product information



Size	Product Code	Fixing			Fixture		
		Diameter	Length	Plate diameter	Recommended thickness		
		d	L	D	t <sub>fix</sub> A, B, C	t <sub>fix</sub> D	t <sub>fix</sub> E
[mm]							
Ø10	KI-070	10	70	60	35	20	0
	KI-090	10	90	60	55	40	20
	KI-120	10	120	60	85	70	50
	KI-140	10	140	60	105	90	70
	KI-160	10	160	60	125	110	90
	KI-180	10	180	60	145	130	110
	KI-200	10	200	60	165	150	130
KI-220	10	220	60	185	170	150	

Installation data

Substrate			A, B, C	D	E
Fixing diameter	d	[mm]	10	10	10
Hole diameter in substrate	d <sub>0</sub>	[mm]	10	10	10
Min. hole depth in substrate	h <sub>0</sub>	[mm]	35	50	70
Min. installation depth	h <sub>nom</sub>	[mm]	25	40	60
Min. substrate thickness	h <sub>min</sub>	[mm]	100	100	100
Min. spacing	s <sub>min</sub>	[mm]	100	100	100
Min. edge distance	c <sub>min</sub>	[mm]	100	100	100

Basic performance data

Performance data for single anchor without influence of edge distance and spacing

Substrate	[mm]	Concrete C12/15	Concrete min. C16/20	Solid brick	Sand-lime solid brick	Calcium silicate hollow	Perforated ceramic brick	Perforated ceramic brick (i.e. Porotherm)	MEGA MAX	Lightweight concrete hollow block	Lightweight concrete block	Aerated concrete
		Effective embedment depth h <sub>ef</sub>	[mm]	25	25	25	25	25	25	25	25	40
MEAN ULTIMATE LOAD N <sub>Rk,um</sub>												
KI-10	[kN]	0.78	0.70	0.72	0.89	0.96	0.74	0.57	0.67	0.75	0.78	0.25
CHARACTERISTIC LOAD N <sub>Rk</sub>												
KI-10	[kN]	0.50	0.50	0.50	0.60	0.60	0.40	0.40	0.30	0.40	0.50	0.10
DESIGN LOAD N <sub>Rd</sub>												
KI-10	[kN]	0.25	0.25	0.25	0.30	0.30	0.20	0.20	0.15	0.20	0.25	0.05
RECOMMENDED LOAD N <sub>rec</sub>												
KI-10	[kN]	0.18	0.18	0.18	0.21	0.21	0.14	0.14	0.11	0.14	0.18	0.04

## Basic performance data

Fixing type		KI-10
Plate resistance	[kN]	2.1
Plate stiffness	[kN/mm]	0.5
Point thermal transmittance	-	0

## Product commercial data

Size	Product Code	Fixing			Quantity [pcs]			Weight [kg]			Bar Codes
		Diameter [mm]	Length [mm]	Plate diameter [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
Ø10	KI-070 <sup>1)</sup>	10	70	60	250	250	14000	2.5	2.5	167.4	5906675210049
	KI-090 <sup>1)</sup>	10	90	60	250	250	14000	2.5	2.5	170.0	5906675210148
	KI-120 <sup>1)</sup>	10	120	60	250	250	12000	3.2	3.2	181.2	5906675210247
	KI-140 <sup>1)</sup>	10	140	60	250	250	10000	4.0	4.0	190.0	5906675210346
	KI-160 <sup>1)</sup>	10	160	60	250	250	10000	4.2	4.2	198.0	5906675210445
	KI-180 <sup>1)</sup>	10	180	60	250	250	7500	4.5	4.5	165.0	5906675210544
	KI-200 <sup>1)</sup>	10	200	60	250	250	7500	5.1	5.1	181.5	5906675210643
KI-220 <sup>1)</sup>	10	220	60	250	250	7500	5.1	5.1	182.1	5906675159126	

1) ETA-07/0291