

KI-10N Long expansion zone facade fixing with metal pin

Hammer-in facade fixing 60mm long expansion zone for high performance in masonry, as well as lightweight and aerated concrete



Approvals and Reports

- ETA-07/0221
- UKTA-22/6343



Product information

Features and benefits

- Easy installation with best performance in lightweight base materials
- Approved for use in base material categories B, C, D, and E
- Steel nail allows fast and trouble-free installation with correct expansion of the plug.
- Reduction of thermal bridge formation (value 0.3W/K) through the integration of an impact-resistant plastic overmoulding on the nail head.
- Plate stiffness (value 0.5 kN/mm) ensures smooth elevation surface and stable insulation system.
- Can be used with additional KWL insulation holding plate, available in 90, 110 and 140mm flange sizes.

Applications

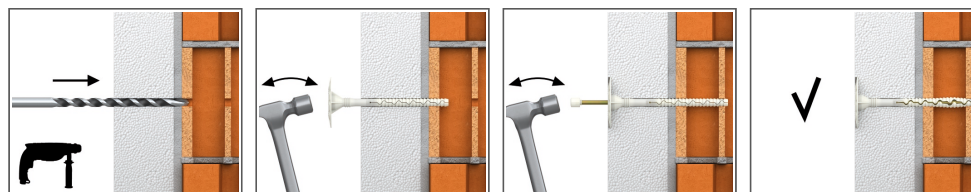
- External Thermal Insulation Composite Systems (ETICS)
- Polystyrene (EPS) boards
- Mineral wool (MW) boards
- Light wood wool building boards
- Polyurethane (PU) boards
- Lightweight recycled panels

Base materials

Approved for use in:

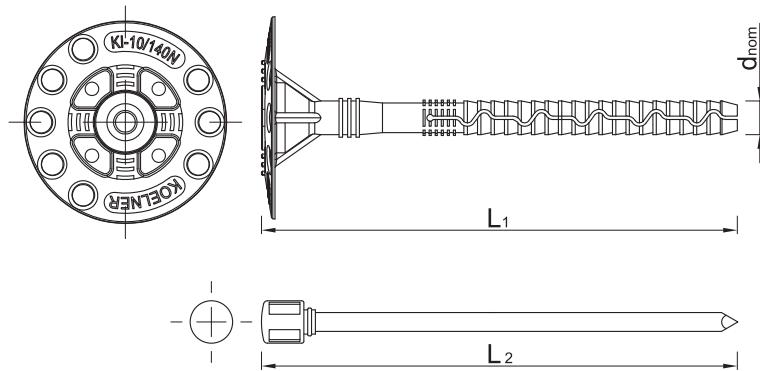
- Solid Brick (Use category B)
- Hollow Brick (Use category C)
- Vertically-perforated clay block (Use category C)
- Lightweight Concrete Block (Use category C)
- Reinforced components of lightweight aggregate concrete (Use category D)
- Aerated Concrete Block (Use category D)

Installation guide



1. Drill a hole of required diameter and depth
2. Drilling depth of min 80mm in approved materials.
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 60mm in approved materials.
5. Hammer the steel nail into the plastic sleeve until fixing is secure and flush with insulation material.
6. In soft insulation panels the fixing should be combined with insulation retaining plates KWL-90, KWL-110, KWL-140.
7. Temperature range when installed -35C to +80C.

Product information



Size	Product Code	Fixing			Fixture	
		Diameter	Length	Plate diameter	Recommended thick- ness	Max. thickness
		d	L	D	t _{fix} B, C, D, E	
		[mm]				
Ø10	R-KI-120N	10	10	120	60	70
	R-KI-140N	10	140	60	70	-
	R-KI-160N	10	160	60	90	-
	R-KI-180N	10	180	60	110	-
	R-KI-200N	10	200	60	130	-
	R-KI-220N	10	220	60	150	-
	R-KI-260N	10	260	60	190	-
	R-KI-300N	10	300	60	210	-

Installation data

Substrate			B, C, D, E
Hole diameter in substrate	d_o	[mm]	10
Min. hole depth in substrate	h_o	[mm]	70
Min. installation depth	h_{nom}	[mm]	60
Min. substrate thickness	h_{min}	[mm]	100
Min. spacing	s_{min}	[mm]	100
Min. edge distance	c_{min}	[mm]	100
Fixing diameter	d	[mm]	10

Basic performance data

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

Substrate		Solid brick	Calcium silicate hollow	Hollowed brique	Perforated ceramic brick	Vertical perforated porous block	Lightweight concrete	Aerated concrete AAC2	Aerated concrete AAC5
Effective embedment depth h_{ef}	[mm]	60	60	60	60	60	60	60	60
MEAN ULTIMATE LOAD $N_{Rk,m}$									
KI-10N	[kN]	1.21	0.90	0.89	1.20	1.29	1.15	1.04	1.31
CHARACTERISTIC LOAD N_{Rk}									
KI-10N	[kN]	0.75	0.40	0.40	0.55	0.60	0.65	0.30	0.90
DESIGN LOAD N_{Rd}									
KI-10N	[kN]	0.38	0.20	0.20	0.27	0.30	0.32	0.15	0.45
RECOMMENDED LOAD N_{rec}									
KI-10N	[kN]	0.27	0.14	0.14	0.19	0.21	0.22	0.11	0.32

Basic performance data

Fixing type		KI-10N
Plate resistance	[kN]	1.23
Plate stiffness	[kN/mm]	0.5
Point thermal transmittance	[W/K]	0.003

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	R-KI-120N ¹⁾	10	10	120	250	250	6000	8.2	8.2	227.8	5906675261416
	R-KI-140N ¹⁾	10	140	60	250	250	4000	8.2	8.2	161.8	5906675261423
	R-KI-160N ¹⁾	10	160	60	250	250	4000	9.4	9.4	180.4	5906675261430
	R-KI-180N ¹⁾	10	180	60	250	250	6000	10.0	10.0	271.0	5906675261447
	R-KI-200N ¹⁾	10	200	60	250	250	6000	10.7	10.7	286.6	5906675261454
	R-KI-220N ¹⁾	10	220	60	250	250	3000	12.2	12.2	176.8	5906675261461
	R-KI-260N ¹⁾	10	260	60	200	200	2400	11.4	11.4	166.4	5906675261478
	R-KI-300N ¹⁾	10	300	60	200	200	2400	12.7	12.7	182.0	5906675261485

1) ETA-07/0221