

KI-10NS Screw-in insulation fixing with long expansion zone

Screw-in facade fixing with 60mm long expansion zone for high performance in all base materials



Approvals and Reports

- ETA-07/0221



Product information

Features and benefits

- Quick and easy installation in all substrates
- Approved for use in all base material categories A,B,C,D,E
- Steel screw 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 screw 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 (recommended for soft insulation materials such as mineral wool).

Applications

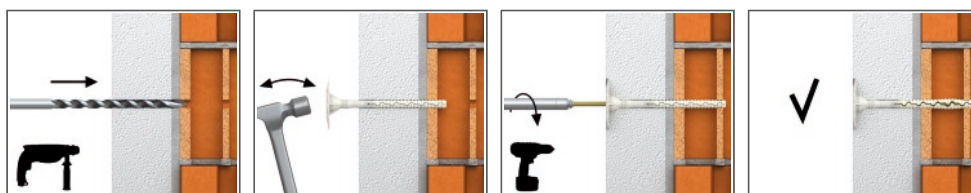
- External Thermal Insulation Composite Systems (ETICS)
- Polystyrene (EPS) boards
- Mineral wool (MW) boards
- Light wood wool building boards
- Polyurethane (PU) boards
- Lightweight recycled panels

Base materials

Approved for use in:

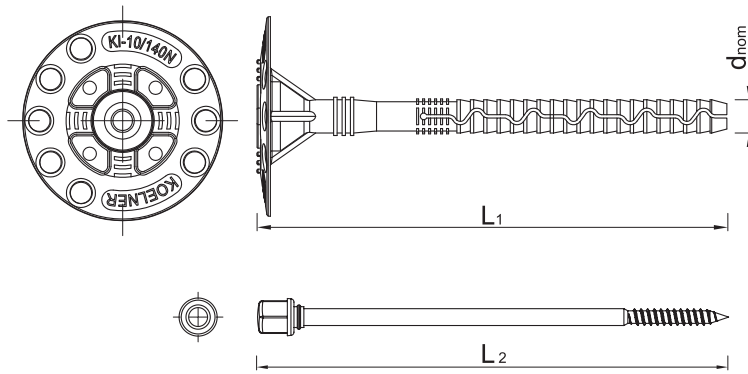
- Concrete C12/15-C50/60 (Use category A)
- Solid Brick (Use category B)
- Hollow Brick (Use category C)
- Vertically-perforated clay block (Use category C)
- Reinforced components of lightweight aggregate concrete (Use category D)
- Aerated Concrete Block (Use category D)

Installation guide



1. Drill a hole of required diameter and depth
2. Lightly tap the plastic sleeve through the insulation material into hole with a hammer, until fixing depth is reached
3. Tighten screw until fixing is secure and flush with insulation material
4. Embedment depth of min 40mm in concrete and 60mm in other approved materials
5. Drilling depth of min 60mm in concrete and 80mm in other approved materials
6. Temperature range when installed -35C to +80C.
7. In soft insulation panels the fixing should be combined with insulation retaining plates KWL-90, KWL-110, KWL-140.

Product information



Size	Product Code	Fixing			Fixture
		Diameter	Length	Plate diameter	Recommended thickness
		d	L	D	t _{fix} B, C, D, E
[mm]					
Ø10	KI-140NS	10	140	60	70
	KI-160NS	10	160	60	90
	KI-180NS	10	180	60	110
	KI-200NS	10	200	60	130
	KI-220NS	10	220	60	150
	KI-260NS	10	260	60	190
	KI-300NS	10	300	60	230

Installation data

Substrate			B, C, D, E
Fixing diameter	d	[mm]	10
Hole diameter in substrate	d ₀	[mm]	10
Min. hole depth in substrate	h ₀	[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

Basic performance data

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

Substrate	[mm]	Concrete C20/25	Concrete C50/60	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]	40	40	60	60	60	60	60	60
MEAN ULTIMATE LOAD N _{Ru,m}											
KI-10NS	[kN]	1.15	1.31	1.30	1.11	0.79	1.18	0.84	1.23	0.90	1.36
CHARACTERISTIC LOAD N _{Rk}											
KI-10NS	[kN]	0.50	0.60	0.90	0.75	0.60	0.90	0.50	0.60	0.60	0.75
DESIGN LOAD N _{Rd}											
KI-10NS	[kN]	0.25	0.30	0.45	0.38	0.30	0.45	0.25	0.30	0.30	0.38
RECOMMENDED LOAD N _{rec}											
KI-10NS	[kN]	0.18	0.21	0.32	0.27	0.21	0.32	0.18	0.21	0.21	0.27

Basic performance data

Fixing type		KI-10NS
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	KI-140NS ¹⁾	10	140	60	250	250	8000	8.1	8.1	289.0	5906675216140
	KI-160NS ¹⁾	10	160	60	250	250	8000	9.4	9.4	329.2	5906675216249
	KI-180NS ¹⁾	10	180	60	250	250	6000	10.6	10.6	283.2	5906675216348
	KI-200NS ¹⁾	10	200	60	250	250	6000	11.4	11.4	302.3	5906675216447
	KI-220NS ¹⁾	10	220	60	250	250	6000	12.1	12.1	320.7	5906675216546
	KI-260NS ¹⁾	10	260	60	200	200	4800	11.2	11.2	299.9	5906675216744
	KI-300NS ¹⁾	10	300	60	200	200	4800	12.3	12.3	324.6	5906675216645

1) ETA-07/0221