#### Use

**Additional thermal insulation fixing** – protects thermal insulation system against forces related to wind loads (suction).

### **Properties**

Fixings with plastic pin – recommended for fixing polystyrene boards.

Fixings with metal pin – recommended for fixing both polystyrene and mineral wool boards.

They don't cause thermal bridging in the point of penetration through the thermal insulation.

### Important additional information

- From technological point of view, application of fixings is not required for walls up to 12 m high with appropriately reliable and strong substrate (concerns systems with polystyrene). Check local regulations on the requirements on mechanical fixing.
- If in doubt concerning the bearing capacity of substrate, it is recommended to carry out pull off test.
- The number of fixings should not be lower than 4 pieces for each 1 m². Increase the number of fixings in the building corner zones.
- Detailed data concerning number, type and length of pins as well as their arrangement should be included in the technical design of external thermal insulation.
- The depth of fixings anchoring in the wall structural layer depends on substrate type and should be selected in concordance with requirements of the fixings manufacturer.
- Types of substrates: type A concrete, type B clay brick, sand–lime clay brick, type C – sand-lime and clay hollow brick, type D – lightweight concrete blocks, lightweight concrete aggregate bricks, type E - aerated concrete.

# **MECHANICAL FIXINGS**

## Thermal insulation mechanical fixing

Installation of mechanical fixings can start not earlier than after approx. 24 hours since the insulation material application. Drill a hole of depth recommended for the given fixing length. Then, remove dust from hole and insert the fixing. Next, hammer in (in case of hammered in fixings) or screw in (in case of screwed in fixings) the pin. The structure of thermal insulation material must not be damaged by mechanical fixings. Fixing head should keep the plane of thermal insulation material.

### **Technical requirements**

For fixings TERMO: AT-15-7920-2009 For fixings TFIX-8M: ETA-07/0336 For fixings TFIX-8S: ETA-11/0144 For fixings TFIX-8ST: ETA-11/0144 For fixings KI-10N: ETA-07/0221

The above information constitutes basic guidelines for the application of the product and does not release the user from the obligation of carrying out works according to engineering principles and OHS regulations.

At the time of publication of this product data sheet all previous ones become void. Date of update: 2015-07-31

Fixing A-TERMO for polystyrene, with plastic pin, hammered in, diameter 10 mm, substrate type B, C, D, E.	Symbol/index	Available length [mm]	Depth of anchoring [mm] A B	Insulation thickness [mm] A B	Depth of anchoring [mm] C D E	Insulation thickness [mm] C D E	Collective packaging
	A-TERMO-90	90	25	50	50	30	250
	A-TERMO-120	120	25	80	50	60	250
	A-TERMO-140	140	25	100	50	80	250
	A-TERMO-160	160	25	120	50	100	250
	A-TERMO-180	180	25	140	50	120	250
	A-TERMO-200	200	25	160	50	140	250

	Symbol/index	Available length [mm]	Depth of anchoring [mm]	Insulation thickness [mm]	Collective packaging
	TFIX-8M-095	95	25	60	200
	TFIX-8M-115	115	25	80	200
Fixing TFIX 8M for	TFIX-8M-135	135	25	100	200
polystyrene and mineral	TFIX-8M-155	155	25	120	200
wool, with metal pin, hammered in, diameter 8 mm, substrate type A, B, C.	TFIX-8M-175	175	25	140	200
	TFIX-8M-195	195	25	160	200
	TFIX-8M-215	215	25	180	100
	TFIX-8M-235	235	25	200	100
	TFIX-8M-255	255	25	220	100
	TFIX-8M-275	275	25	240	100
	TFIX-8M-295	295	25	260	100

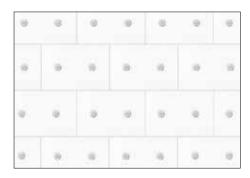
	Symbol/index	Available length [mm]	Depth of anchoring [mm]	Insulation thickness [mm]	Collective packaging
Fixing KI-10N for	A-KI-120-N	120	60	50	250
polystyrene and mineral	A-KI-140-N	140	60	70	250
wool, with metal pin and long expansion zone, hammered in, diameter 10 mm, sub- strate type B, C, D, E.	A-KI-160-N	160	60	90	250
	A-KI-180-N	180	60	110	250
	A-KI-200-N	200	60	130	250
	A-KI-220-N	220	60	150	250
	A-KI-260-N	260	60	190	250
	A-KI-300-N	300	60	230	250

Additional accessories						
Symbol/index	Collective packaging					
KWL-140	Pressing collar for lamella wool, diameter 140 mm, to be used with KI-10N fixings	200				
KFS (cutter)	Thermal insulation hole cutter	1				
KES (plug)	Polystyrene plug	250				

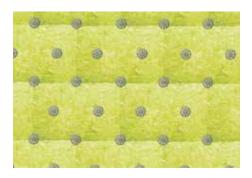
	Symbol/index	Available length [mm]	Depth of anchoring [mm] ABCD/E	Inuslation thickness [mm] ABCD/E	Collective packaging
	TFIX-8S-115	115	25/65	80/40	200
	TFIX-8S-135	135	25/65	100/60	200
	TFIX-8S-155	155	25/65	120/80	200
	TFIX-8S-175	175	25/65	140/100	200
Fixing TFIX 8S for	TFIX-8S-195	195	25/65	160/120	200
polystyrene and mineral wool, with metal pin,	TFIX-8S-215	215	25/65	180/140	100
screwed in, diameter	TFIX-8S-235	235	25/65	200/160	100
8 mm, substrate type	TFIX-8S-255	255	25/65	220/180	100
A, B, C, D, E.	TFIX-8S-275	275	25/65	240/200	100
	TFIX-8S-295	295	25/65	260/220	100
	TFIX-8S-335	335	25/65	300/260	100
	TFIX-8S-355	355	25/65	320/280	100
	TFIX-8S-375	375	25/65	340/300	50
	TFIX-8S-395	395	25/65	360/320	50
	TFIX-8S-415	415	25/65	380/340	50

	Symbol/index	Available length [mm]	Depth of anchoring [mm] ABCD/E	Insulation thickness [mm] ABCD/E	Collective packaging
	TFIX-8ST-115	115	25/65	80/40	200
	TFIX-8ST-135	135	25/65	100/60	200
	TFIX-8ST-155	155	25/65	120/80	200
Fixing TFIX 8ST for	TFIX-8ST-175	175	25/65	140/100	200
polystyrene and mineral	TFIX-8ST-195	195	25/65	160/120	200
wool, with metal pin	TFIX-8ST-215	215	25/65	180/140	100
and polyurethane foam	TFIX-8ST-235	235	25/65	200/160	100
insulating cap, screwed in, diameter 8 mm, sub-	TFIX-8ST-255	255	25/65	220/180	100
strate type A, B, C, D, E.	TFIX-8ST-275	275	25/65	240/200	100
	TFIX-8ST-295	295	25/65	260/220	100
	TFIX-8ST-335	335	25/65	300/260	100
	TFIX-8ST-355	355	25/65	320/280	100
	TFIX-8ST-375	375	25/65	340/300	50
	TFIX-8ST-395	395	25/65	360/320	50
	TFIX-8ST-415	415	25/65	380/340	50

Symbol/index Diameter [mm]		Product type	Collective packaging
TFIX-8S-DEVICE	Ø 63	Thermal insulation hole cutter for TFIX-8S	100
TFIX-8S-EPS	Ø 62 x 10	Polystyrene cap	250
TFIX-8S-MW	Ø 62 x 10	Mineral wool cap	250
TFIX-8S-TOOL	Ø 80	Installation tool TFIX-8S for a screwer	1
TFIX-8ST-TOOL	Ø 80	Installation tool TFIX-8ST for a screwer	1



 ${\bf POLYSTYRENE}-{\sf FIXINGS}~{\sf ARE}~{\sf PLACED}~{\sf IN}~{\sf THE}~{\sf CENTRE}~{\sf OF}~{\sf THE}~{\sf BOARD}$ 



 $\mbox{\bf MINERAL WOOL}$  – FIXINGS are placed centrally and in corners of neighbouring boards