

PRODUCT DATA SHEET – WK THERM-8

Section 1. PRODUCT DESCRIPTION

**HAMMER DRIVEN FASTENER WITH METAL PIN AND SHORT EXPANSION ZONE –
WK THERM-8**



Hammer driven fastener with metal pin and short expansion zone WK THERM-8 is made from polyethylene, and the pin from galvanized steel, with the head sealed in glass-fibre reinforced polyamide which reduces spot thermal conductivity of the fastener. Sealing rings on the head of the pin protect it against corrosion. Fastener WK THERM-8 should be used to transfer loads of wind suction forces and applied as an additional mechanical fixing for the whole system, recommended for:

- EPS polystyrene
- XPS polystyrene
- mineral wool (with support washer TDX-90 and TDX-140)
- mineral wool lamella board (with support washer TDX-90 and TDX-140)

Types of substrates on which fastener WK THERM-8 can be installed according to ETAG 014:

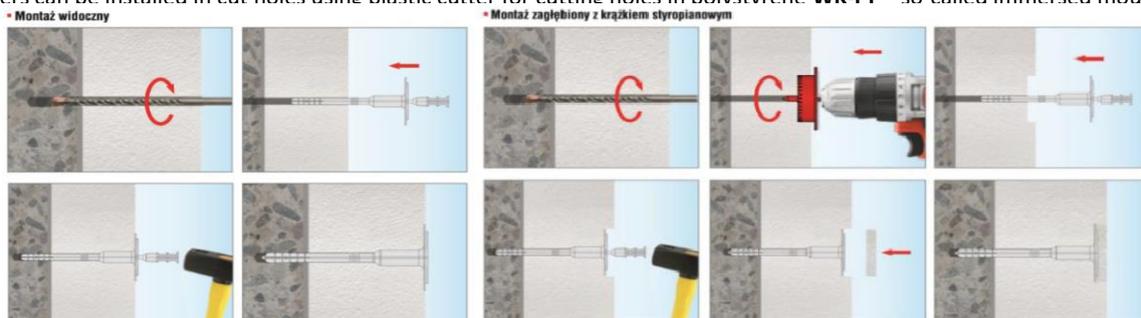


Fasteners hold European Technical Assessment: ETA-11/0232



Section 2. METHOD OF INSTALLATION

1. Before installation identify the substrate and select suitable fasteners
 2. Select adequate length of the fastener so that expansion zone is in the construction material of the wall
 3. Minimum length of the fastener is: $L_d = t_{fix} + t_{tol} + h_{eff}$, where: t_{fix} - thickness of insulation material to be fixed, t_{tol} - thickness of substrates (adhesive + existing plaster), h_{eff} - depth of fastener anchorage in the substrate (given in the sheet and in Technical Approval)
 4. Before installation prepare the substrate as recommended by ETICS manufacturer
 5. Fix thermal insulation panels correctly using an adhesive
 6. Diameter of drilled holes should match diameter of the fasteners used
 7. Drilled holes in substrates of solid materials should be deeper by min. 10 mm compared to the fastener anchorage depth
 8. Clean the holes drilled in solid materials of drillings with a back and forth motion of the drill at a reduced speed, repeating it four times
 9. Drill the holes in substrates of hollowed bricks without impact as this will cause breakage of inner walls of the substrate and reduce pull-out resistance of fasteners
 10. Number of fasteners per 1m² should be defined in thermal insulation design. Recommended number of fasteners: FOR POLYSTYRENE:
 - up to the height of 15m from the ground, as minimum use 6pcs/m² in the middle area of a wall and 8pcs/m² in a corner area
 - above 15m from the ground, as minimum use 8pcs/m² in the middle area of a wall and 10pcs/m² in a corner area; for WOOL number of fasteners should be increased in each area by 2pcs/m²
- Recommendation shall not replace thermal insulation design!!**
11. Fix the fasteners so that the installation spot matches the area where adhesive is placed on a thermal insulation panel
 12. Embed the fastener body so that the fastener washer is faced with thermal insulation material
 13. Then drive the fastener pin to firmly attach the fastener
 14. Fasteners can be installed in cut holes using plastic cutter for cutting holes in polystyrene **WK-FT** – so-called immersed mount



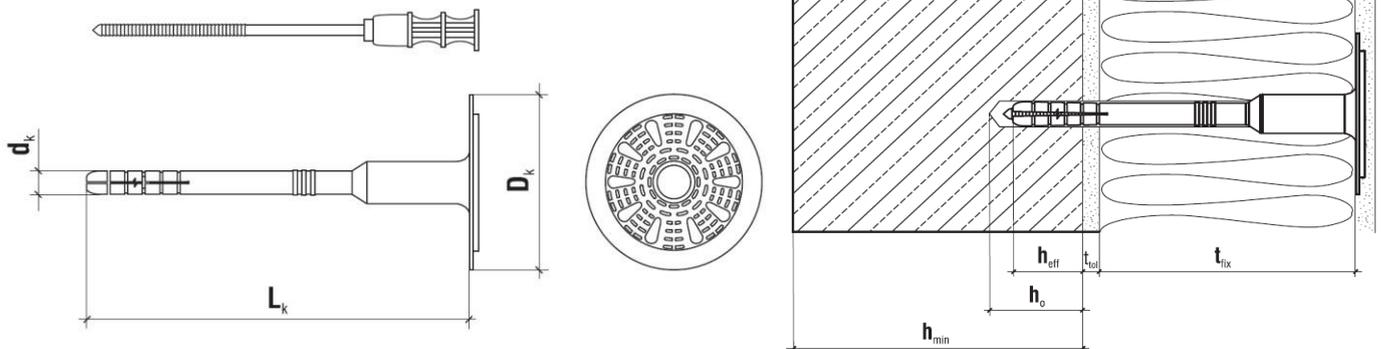
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Section 3. TECHNICAL DATA

TECHNICAL PARAMETERS		
Parameter	Unit	Value
Plug diameter	d_k [mm]	8
Plate diameter	D_k [mm]	60
Anchorage depth	h_{eff} [mm]	25
Drilled hole depth	h_o [mm]	35
Thermal conductivity	χ [W/K]	0.002
Plate stiffness	S [kN/mm]	0.60
Use categories	[-]	A B C
Plug material	[-]	PE
Pin material	[-]	Galvanized steel, head sealed in PA + GF
European Technical Assessment	[-]	ETA-11/0232

STRENGTH PARAMETERS			
Substrate category	Substrate type	Density [kg/dm ³]	Characteristic pull-out resistance [kN]
A	Concrete C12/15	≥ 2.25	1.20
A	Concrete C16/20 – C50/60	≥ 2.30	1.50
B	Solid clay brick	≥ 1.70	1.50
B	Calcium silica solid brick	≥ 2.00	1.50
C	Calcium silicate hollow blocks	≥ 1.60	1.20
C	Perforated brick	≥ 0.95	0.60
C	Porotherm 25	≥ 0.80	0.60
C	MEGA-MAX 250	≥ 0.80	0.60

Partial safety factor $\gamma_M=2$ in absence of regulations



SELECTION TABLE						
Product code	Fastener diameter and length ($d_k \times L_k$)	Insulation material thickness t_{fix} [mm]				Number of pieces in a box
		New buildings (t_{tot} adhesive layer of 10mm)		Old buildings (t_{tot} adhesive layer of 10mm + 20mm of old plaster)		
		Without cutter	With cutter	Without cutter	With cutter	
WK THERM-08095	8x95	60	80	40	60	200
WK THERM-08115	8x115	80	100	60	80	200
WK THERM-08135	8x135	100	120	80	100	200
WK THERM-08155	8x155	120	140	100	120	200
WK THERM-08175	8x175	140	160	120	140	200
WK THERM-08195	8x195	160	180	140	160	200
WK THERM-08215	8x215	180	200	160	180	100
WK THERM-08235	8x235	200	220	180	200	100
WK THERM-08255	8x255	220	240	200	220	100
WK THERM-08275	8x275	240	260	220	240	100
WK THERM-08295	8x295	260	280	240	260	100

Section 4. REMARKS

1. All previous versions of this Product Data Sheet shall cease to be valid
2. Data given in this Product Data Sheet is in accordance with current knowledge and published in good faith. KLIMAS Sp. z o.o. is not responsible for correctness and quality of the fixing if recommendations regarding method of use and installation are not followed.