The free thermal bridging ETICS hammerset fixing with GRP nail

Polystyrene rigid foam boards

Setting the hammerset fixing on polystyrene rigid foam boards

BUILDING MATERIALS

- Building material classes A, B, C, D, E
- Concrete
- Building brick
- Solid sand-lime brick
- Hollow blocks made from lightweight concrete
- Vertically perforated brick
- Perforated sand-lime brick
- Lightweight aggregate concrete
- Aerated concrete

APPROVALS

ETA
CE
ETA-09/0171
ETAG 014
Use categories A, B, C, D, E

λ-Value-Class 0.000 [W/K]
NO THERMAL BRIDGING

ADVANTAGES

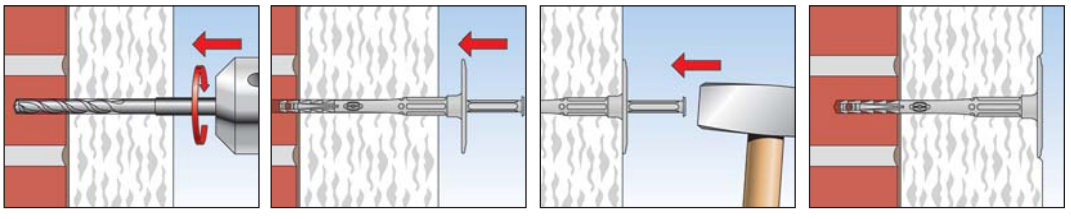
- To set with few hammer blows.
- The disc fits tight into the insulation thanks to its thickness of only 2.5 mm. Thus allows the application of low-cost, thin reinforcement layers.
- Optimised retention forces thanks to the glass fibre reinforced plastic nail (GRP).
- Small anchoring depth of 35 mm saves on drilling times.
- Thanks to the GRP nail, the fixing is free of thermal bridging with the Chi value 0.000 [W/K].
- The compression zone in the shank allows the disc to be drawn precisely into the insulation.
- Can be combined with the insulating discs DT 90, DT 110 and DT 140 for very soft insulating materials.
- For insulating material thicknesses up to 180 mm.

APPLICATIONS

- Attachment of ETICS insulating boards on concrete and masonry
- Flush-to-surface installation in ETICS insulating materials and mineral wool e.g. polystyrene

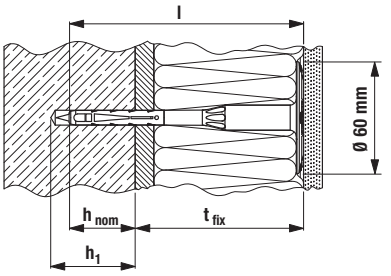
FUNCTIONING

- The fixing is set in push-through installation.
- Simple, fast setting by driving the GRP nail in using a standard hammer.
- Non load bearing layers such as adhesive and old plaster are included in the maximum useful length.



TECHNICAL DATA

termoz **PN 8**



t_{fix} = thickness of insulation + glue + old render

Item	Art.-No.	Approval ETA	Drill hole diameter d_0 [mm]	Min. drill hole depth h_1 [mm]	Effect. anchorage depth h_{nom} [mm]	Anchor length l [mm]	Max. usable length t_{fix} [mm]	Disk Ø [mm]	Sales unit [pcs]
termoz PN 8/110	**506325**	■	8	45	35	108	70	60	100
termoz PN 8/130	**506326**	■	8	45	35	128	90	60	100
termoz PN 8/150	**506327**	■	8	45	35	148	110	60	100
termoz PN 8/170	**506328**	■	8	45	35	168	130	60	100
termoz PN 8/190	**506329**	■	8	45	35	188	150	60	100
termoz PN 8/210	**506330**	■	8	45	35	208	170	60	100
termoz PN 8/230	**506331**	■	8	45	35	228	190	60	100

for building material class D + E: h1 = 65 mm, hnom = 55 mm

LOADS

termoz PN 8 [3]

Highest permissible loads for a single anchor[1) 4)] for multiple use for non-structural applications.
For the design the complete assessment ETA-09/0171 has to be considered.

					Concrete and masonry		
Type	**Brick raw density** ρ [kg/dm³]	**min. compressive brick strength** f_b [N/mm²]	**min. embedment depth** h_{nom} [mm]	**min. member thickness** h_{min} [mm]	**permissible tensile load** [3] N_{perm} [kN]	**min. spacing** [2] s_{min} [mm]	**min. edge distance** [2] c_{min} [mm]
Concrete							
PN 8	C12/15		35[6]	100	0,17	100	100
	C16/20				0,17		
	C50/60				0,17		
Solid Clay bricks e.g. acc. to DIN 105-100:2012-01, EN 771-1:2011, Mz							
PN 8	≥ 2,0	12	35[5) 6)]	100	0,20	100	100
Calcium silicate solid bricks, e.g. acc. to DIN V 106:2005-10, EN 771-2:2011, KS							
PN 8	≥ 1,8	12	35[5) 6)]	100	0,20	100	100
Vertically perforated clay bricks e.g. acc. to DIN 105-100:2012-01, EN 771-1:2011, HLz							
PN 8	≥ 1,0	12	35[5) 7)]	100	0,13	100	100
Hollow calcium silicate brick, acc. to DIN V 106:2005-10, EN 771-2:2011, KSL							
PN 8	≥ 1,4	12	35[5) 6)]	100	0,13	100	100
Hollow brick light-weight concrete, e.g. acc. to DIN V 18153-100: 2005-10, EN 771-3:2011 Hbl							
PN 8	≥ 1,2	10	35[6)]	100	0,17	100	100
Lightweight Aggregate Concrete acc. to DIN EN 1520, LAC							
PN 8	≥ 0,9	6	55[5) 6)]	100	0,13	100	100
Autoclaved aerated concrete blocks, e.g. AAC acc. to DIN V 4165-100:2005-10, EN 771-4							
PN 8	≥ 0,5	4	55[5) 7)]	100	0,10	100	100
	≥ 0,6	6	55[5) 7)]		0,13		

1) The partial safety factors for material resistance as regulated in the assessment as well as a partial safety factor for load actions of γ_L = 1,5 are considered.
2) Minimum possible axial spacings resp. edge distances acc. assessment.
3) Plastic anchor for fixing of external thermal insulation composite systems with rendering acc. ETAG014. Only tensile wind loads are permitted.
4) The given loads are valid for installation and use of fixations in dry masonry for temperatures in the substrate up to +24 °C (resp. short term up to 40 °C).
5) Restrictions concerning the manufacturer and the permissible hole patterns as well as the web thickness see assessment.
6) Hammer drilling
7) Rotary drilling