

# BRAVOLL® PTH 60/10

## Picture



## Description

Hammer-in plastic anchor for fixing expanded polystyrene (EPS) insulation boards in external wall insulation systems (ETICS).

## Technical data

European Technical Approval:	ETA 08/0166
Technical guidelines:	ETAG 014
Use categories accor. to ETAG 014:	A - B - C
Washer diameter $d_p$ :	60 mm
Drilling diameter $d_o$ :	10 mm
Minimum embedment $h_{nom}$ :	40 mm
Maximum embedment $h_{max}$ :	70 mm
Minimum drilling depth $h_1$ :	$h_{nom} + 10$ mm
Thermal conductivity (p-value):	0.000 W/K
Anchor plate stiffness:	0.7 kN
Anchor plate load resistance:	1.36 kN/mm
Anchor body material:	shock-resistant PP
Expansion nail material:	Glass reinforced polyamide

## Features

- Suitable for concrete, solid and hollow bricks (ETAG cat. A, B, C)
- Safe ETICS fixing
- High pull-out values
- Economical
- Optimum thermal transmittance
- Quick and easy installation
- Special plate surface for optimum render adhesion

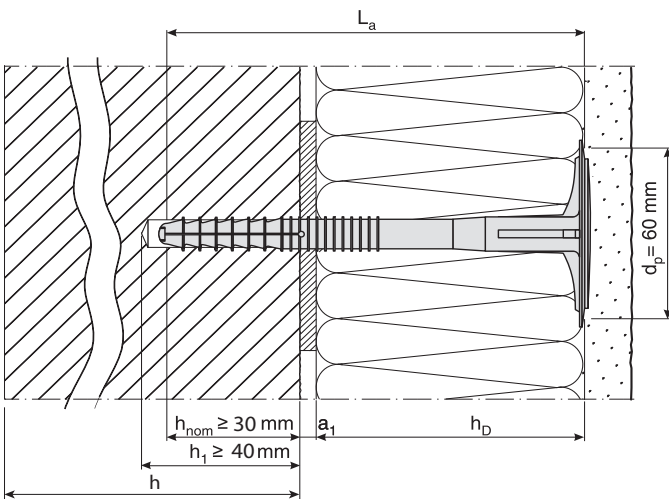
Anchor type BRAVOLL®	Code	Total length $L_a$ : (mm)	Max insulation thickness $h_d$ (mm)		Qty per carton (pcs)
			without glue	with glue	
<b>Material categories:</b>			<b>A - B - C</b>		
PTH 60/10-70 <sup>1)</sup>	10015	70	40	30	300
PTH 60/10-90	11081	90	60	50	250
PTH 60/10-110	11082	110	80	70	200
PTH 60/10-130	10276	130	100	90	200
PTH 60/10-150	11083	150	120	110	200
PTH 60/10-170	11084	170	140	130	200
PTH 60/10-190	11085	190	160	150	200

<sup>1)</sup> For this length the plate diameter is 50mm

Technical parameters

Anchor type BRAVOLL®	PTH 60/10
Base material	Characteristic load resistance $N_{RK}$ (kN)
Concrete C12/15 according to EN 206-1	0.60
Concrete C12/15-C50/60 according to EN 206-1	0.90
Solid clay brick according to EN 771-1	0.75
Hollow bricks according to EN771-1	0.60
Minimum edge distance $c_{min}$ (mm)	100
Minimum spacing $s_{min}$ (mm)	100
Minimum thickness of member $h$ (mm)	100

Drawing



Anchor length calculation

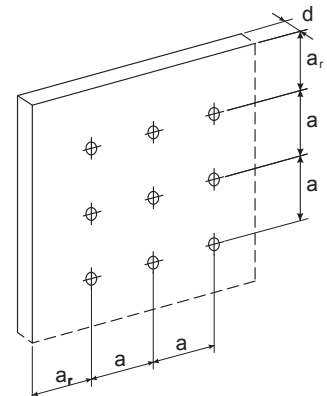
1) Installation without mortar

$$L_a \geq h_D + h_{nom}$$

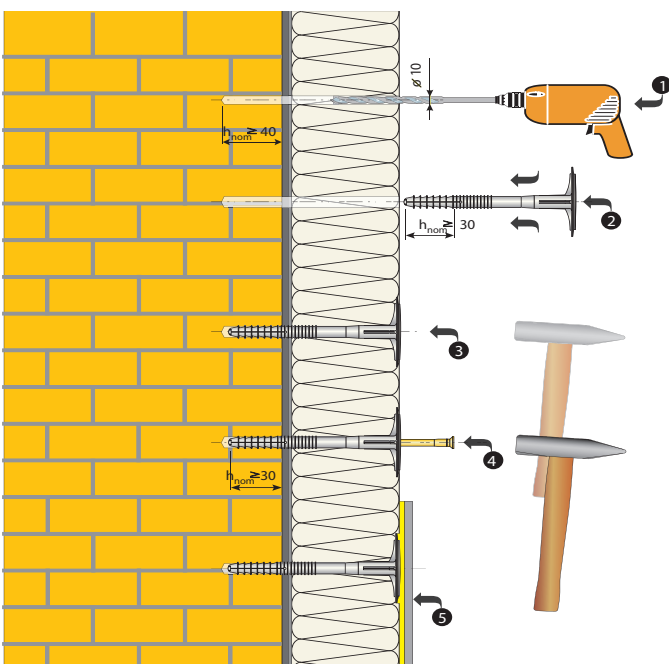
2) Installation with mortar

$$L_a \geq h_D + h_{nom} + \max a_1$$

- $d_p$  - Washer diameter
- $L_a$  - Anchor length
- $h_D$  - Insulation material thickness
- $h_{nom}$  - Overall embedment depth
- $h_1$  - Depth of drill hole in base material
- $a_1$  - Gluing mortar thickness + facade surface flatness tolerance



Installation



- Drill a hole through the insulation board with the right diameter. Hollow bricks should be drilled without hammering (ideally with a specially designed drill bit).
- Insert the anchor into the hole with the anchor plate flush in contact with the insulation material. Slightly hammer the anchor plate surface in order to push it between 0 and 2mm under the insulation material surface. Insert the expansion pin into the anchor body and hammer flush to the anchor plate.
- If the anchor setting is difficult, it probably means that the used drill bit is worn (the drilled diameter is too small or dust remains inside the hole). It is then necessary to use a new drill bit or better clean the hole.
- An 800 g hammer is recommended to perform an optimal installation.
- Within 6 weeks the anchors should be covered by the other ETICS components (for UV protection).
- When leveling out surface unevenness, make sure to respect the minimum embedment.
- Installation must be done at a temperature  $>0^{\circ}\text{C}$ .