

BRAVOLL® PTH-SX**Picture****Description**

Screw-in insulation anchor for fixing all popular types of insulation material boards in ETICS systems. Suitable for surface and countersunk installation.

Technical data

European Technical Approval:	ETA 10/0028
Technical guidelines:	ETAG 014
Use categories acc. to ETAG 014:	A, B, C, D, E
Plate diameter d_p :	60 mm
Drilling diameter d_o :	8 mm
Minimum embedment h_{nom} :	35/55 mm ¹⁾
Maximum embedment h_{max} :	70 mm
Minimum drilling depth h_1 :	actual embedment + 10 - 15 mm ²⁾
Setting tool:	MPS (TORX® T30)
Point thermal transmission χ :	0.000 W/K
Anchor plate resistance:	1.54kN
Anchor plate stiffness:	0.7 kN/mm
Anchor body material:	shock-resistant polypropylene
Screw material:	glass fiber reinforced polyamide

¹⁾The second value applies for cellular concrete.

²⁾For countersunk application the values should be 20mm higher.

Features

- approved and suitable for all categories of base materials
- high pull-out values - reduced quantity of anchors per m² - economical
- Can be installed flush or recessed thanks to the double-sided setting tool BRAVOLL MPS
- no thermal conductivity
- collapse zone in the anchor body for an easier setting of the anchor plate into the insulation boards
- Particularly suitable for difficult and brittle substrates
- quick and easy installation through the insulation material
- pre-assembled screw for faster setting
- can be used in connection with extension washers **BRAVOLL® PTH IT**

Type BRAVOLL®	Code (pc)	Total length L_a (mm)	max. ins. thickness h_p (mm)		max. ins. thickness h_p (mm)		Qty per carton (pcs)
			newbuild ¹⁾	renovation ²⁾	newbuild ³⁾	renovation ⁴⁾	
Base material categories:			A - B - C - D		E		
PTH-SX 135	11601	135	90	70	70	50	200
PTH-SX 155	11602	155	110	90	90	70	200
PTH-SX 175	11603	175	130	110	110	90	100
PTH-SX 195	11604	195	150	130	130	110	100
PTH-SX 215	11605	215	170	150	150	130	100
PTH-SX 235	11606	235	190	170	170	150	100
PTH-SX 255	11607	255	210	190	190	170	100

¹⁾ for 35mm embedment and 10mm of gluing mortar (a_1)

²⁾ for 35mm embedment, 20mm of old render (a_1) and 10 mm of gluing mortar (a_2)

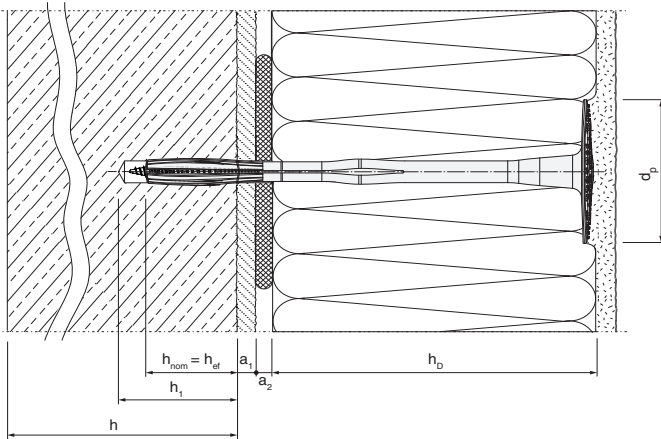
³⁾ for 55mm embedment and 10mm of gluing mortar (a_1)

⁴⁾ for 55mm embedment, 20mm of old render (a_1) and 10 mm of gluing mortar (a_2)

Technical parameters

Type BRAVOLL®	PTH-SX
Base materials	characteristic load resistance N_{RK} (kN)
Concrete C 20/25 acc. to EN 206-1	1.2
Concrete C 16/20 - C 50/60 acc. to EN 206-1	1.2
Solid bricks acc. to EN 771-1	1.2
Sand-lime solid bricks acc. to EN 771-2	1.2
Hollow blocks from aerated concrete acc. to EN 771-3	1.2
Lightweight aggregate concrete acc. to EN 771-3 LAC	0.9
Hollow bricks acc. to EN 771-1	0.6
Vertically perforated clay bricks acc. to ÖN B6124	0.9
Aerated concrete P 2-400 acc. to EN 771-4	0.5
Minimum edge distance c_{min} (mm)	100
Minimum spacing s_{min} (mm)	100
Minimum thickness of member h (mm)	100

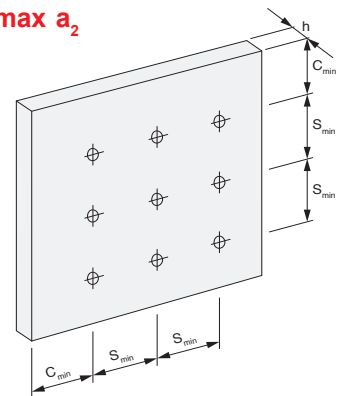
Drawing



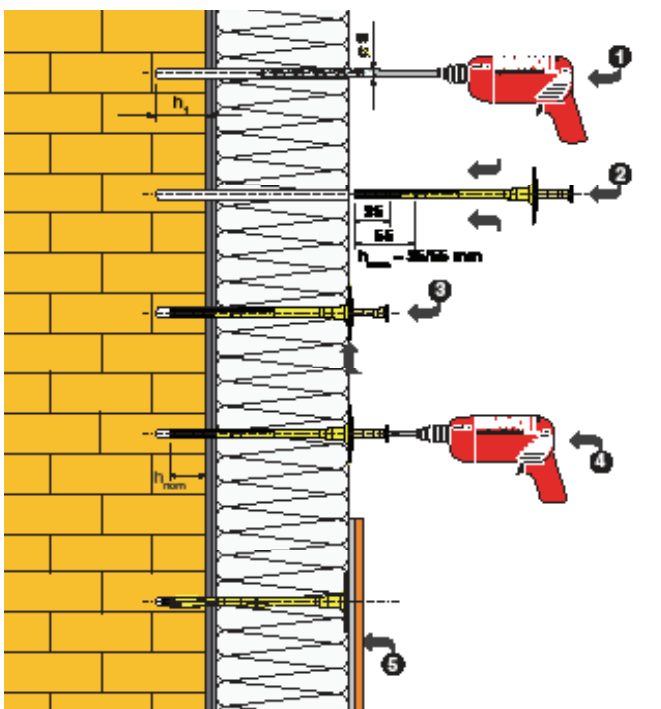
Anchor length calculation

$$L_a \geq h_D + h_{nom} + \max a_1 + \max a_2$$

d_p - anchor plate diameter
 L_a - anchor length
 h_D - insulation material thickness
 h_{nom} - Minimum embedment
 h_{ef} - minimum embedment depth
 h_1 - minimum drilling depth
 h - base material thickness
 a_1 - render thickness
 a_2 - gluing mortar thickness
 + facade surface flatness tolerance



Surface installation



- Drill a hole, insert the anchor in ensuring that the plate is fully in contact with the insulation material. If necessary slightly push the anchor with the screwdriver.
- Shall the anchor setting be difficult, it probably means that the used drill bit is worn (the drilled diameter is too small or too much dust remains inside the hole). It is then necessary to use a new drill bit or better clean the hole. Hollow bricks and aerated concrete should only be drilled without hammering (ideally with a specially designed drill bit).
- Installation should be performed with an electrical screwdriver (max. 350 rpm, ideally with electronic regulation) and the setting tool BRAVOLL MPS (Torx 30).
- Stop screwing when the anchor plate gets flush or between 0 and 2mm below the surface of the insulation material.
- Within 6 weeks the set anchors should be covered by the other ETICS components (for UV protection).
- When levelling out surface unevenness, make sure to respect the minimum embedment depth.
- Installation must be done at a minimum temperature of 0° C.