BRAVOLL® PTH-S

Picture

Description

Screw-in anchor with steel screw for mechanical fixing of the most common insulation materials in external wall insulation systems (ETICS). Recommended for surface and countersunk installation.

Technical data

European Technical Approval:	ETA 08/0267
Technical guideline:	ETAG 014
Use category acc. to ETAG 014:	A - B - C - D - E
Washer diameter d_p:	60 mm
Drilling diameter d_o:	8 mm
Minimum embedment h_{nom}:	25/65[1)] mm
Minimum drilling depth h_1:	actual embedment + 10 - 15 mm[2)]
Setting tool:	BRAVOLL MPS (TORX® T30)
Point thermal transmission χ:	0.002 W/K
Plate resistance:	2.6kN
Plate stiffness:	0.9 kN/mm
Anchor body material:	shock-resistant polypropylene
Screw material:	Galvanized steel with plastic head

[1)] Values after the slash are valid for aerated concrete.
[2)] Values ashould be 20mm higher for countersunk application.

Features

- Universal premium anchor – approved and certified for all types of building materials (acc. to ETAG)
- High pull-out values – Optimal anchor quantity per m²
- Can be installed flush or recessed thanks to the double-sided setting tool BRAVOLL MPS
- Galvanized steel screw with plastic head moulding for limited thermal bridge
- Low embedment depth and diameter 8 drilling for quicker setting
- Quick and easy setting through the insulation material
- Pre-assembled anchor for faster installation
- Very wide length range (from 95 do 475mm) for fixing high thicknesses

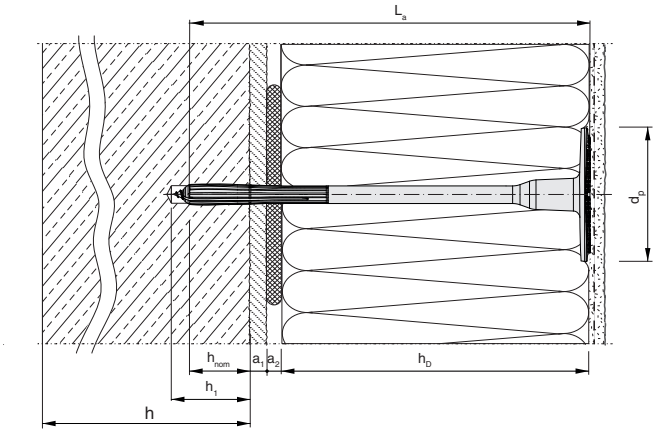
Anchor type	Code (pc)	Total length L_a (mm)	max. insulation thickness h_D (mm)	max. insulation thickness h_D (mm)	max. insulation thickness h_D (mm)	max. insulation thickness h_D (mm)	Qty per box (pcs)
			Newbuilt[1)]	Renovation[2)]	Newbuild[3)]	Renovation[4)]	
Base material categories:			A - B - C - D		E		
PTH-S 95	10588	95	60	40	-	-	200
PTH-S 115	10589	115	80	60	40	-	200
PTH-S 135	10590	135	100	80	60	40	200
PTH-S 155	10591	155	120	100	80	60	200
PTH-S 175	10592	175	140	120	100	80	100
PTH-S 195	10593	195	160	140	120	100	100
PTH-S 215	10594	215	180	160	140	120	100
PTH-S 235	10595	235	200	180	160	140	100
PTH-S 255	10596	255	220	200	180	160	100
PTH-S 275	11194	275	240	220	200	180	100
PTH-S 295	11492	295	260	240	220	200	100
PTH-S 315	11494	315	280	260	240	220	100
PTH-S 335	11495	335	300	280	260	240	100
PTH-S 355	11496	355	320	300	280	260	100
PTH-S 375	11747	375	340	320	300	280	100
PTH-S 395	11748	395	360	340	320	300	100
PTH-S 415	11749	415	380	360	340	320	100
PTH-S 435	11750	435	400	380	360	340	100
PTH-S 455	11751	455	420	400	380	360	100
PTH-S 475	11752	475	440	420	400	380	100

[1)] For 25mm embedment and 10 mm of glue (a_2)
[2)] For 25mm embedment, 20mm old render (a_1) and 10 mm of glue (a_2)
[3)] For 65mm embedment and 10 mm of glue (a_2)
[4)] For 65mm embedment, 20mm old render (a_1) and 10 mm of glue (a_2)

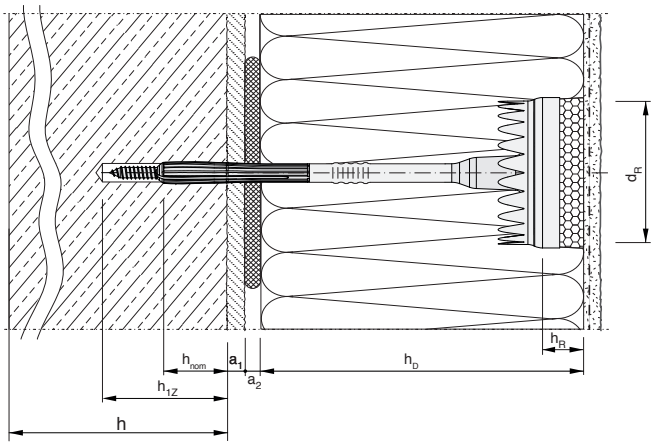
Technical parameters

Anchor type	PTH-S 60/8
Base materials	Carakteristic load resistance for surface and contersunk application N_{RK} (kN)
Concrete C 12/15 acc. to EN 206-1	1.5
Concrete C 16/20 - C 50/60 acc. to EN 206-1	1.5
Solid clay bricks according to EN 771-1	1.5
Solid sand-lime bricks according to EN 771-2	1.2
Lightweight concrete hollow blocks acc. to EN 771-3	1.5
Lightweight concrete with aerated aggregate acc. to EN 1520 (LAC)	1,0
Hollow clay bricks acc. to EN 771-1	0.75
Vertically perforated clay bricks acc. to Önorm B 6124	0.6
Aerated concrete P2-400 acc. to EN 771-4	0.6
Minimum edge distance c_{min} (mm)	100
Minimum spacing s_{min} (mm)	100
Minimum thickness of member h (mm)	100

Drawing - Surface installation

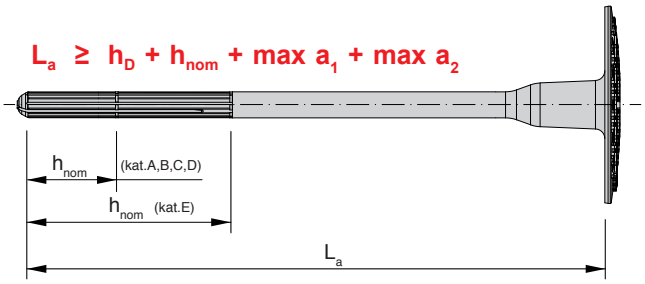


Drawing - Countersunk installation



Anchor length calculation

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

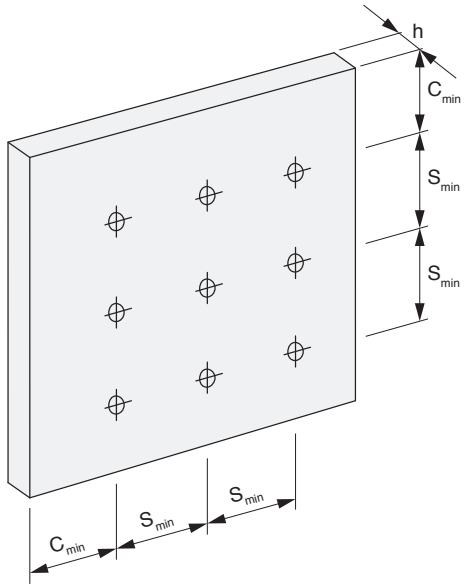


d_p - Washer diameter
L_a - Anchor length
h_D - Ins. material thickness
h_{nom} - Minimum embedment

h_{1P} - Minimum drilling depth - surface installation
h_{1Z} - Minimum drilling depth - countersunk installation

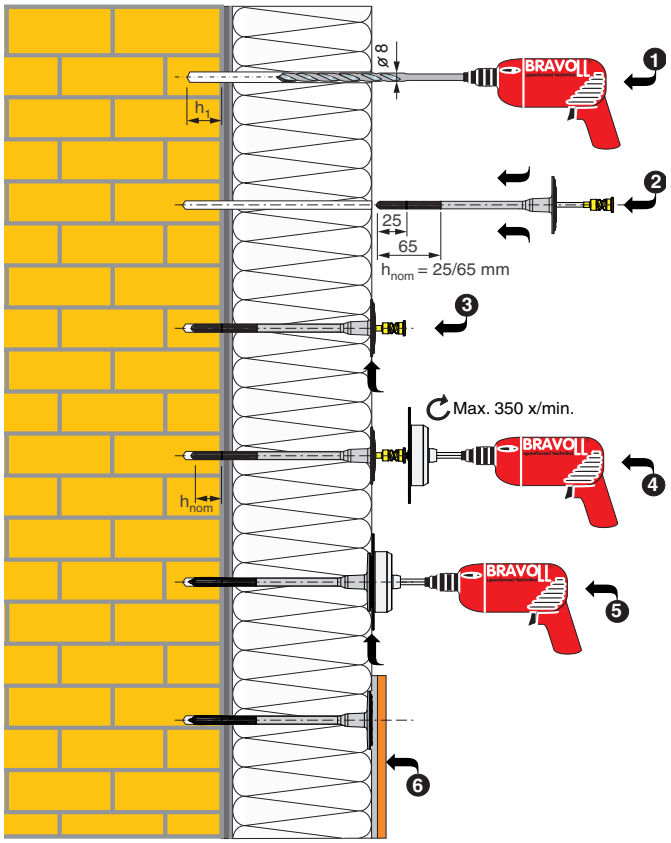
h - Base member thickness
h_R - IZ insulation cap thickness
a_1 - Render thickness
a_2 - Gluing mortar thickness + facade surface flatness tolerance

Anchor positioning



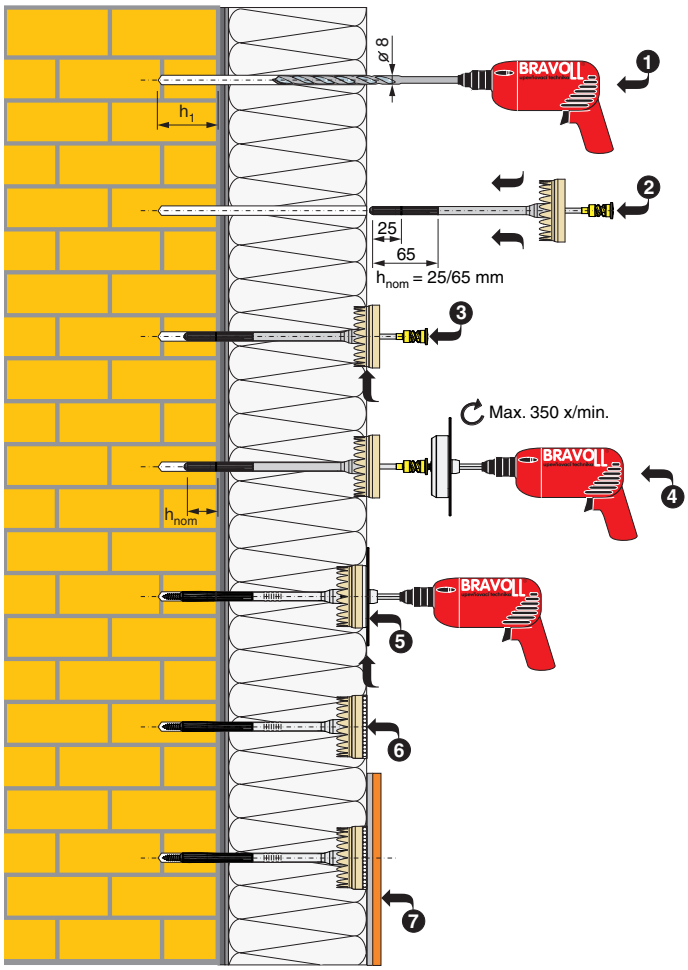
BRAVOLL® upevňovací technika

Surface installation



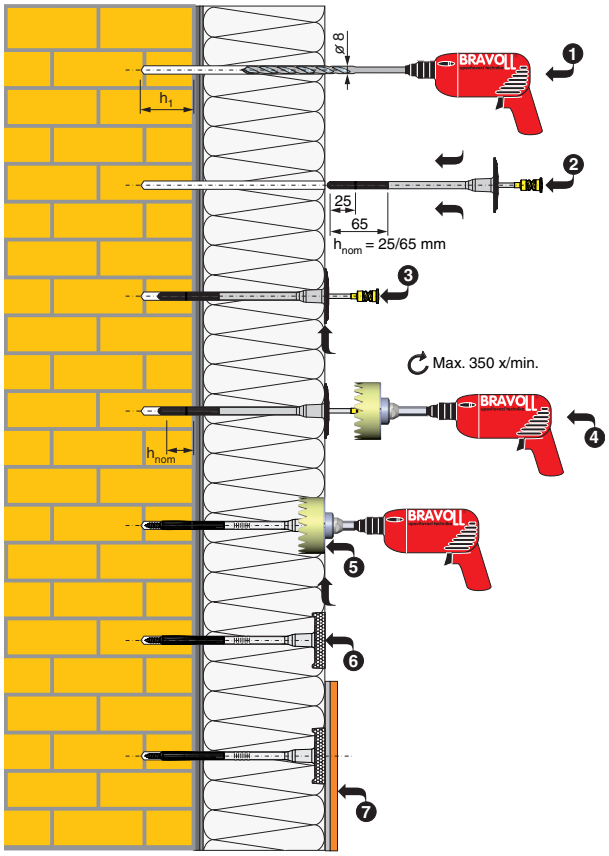
- Insert the anchor into the predrilled hole, ensure the washer is in contact with the insulation material. If necessary, slightly push the anchor with the screwdriver.
- If the anchor setting is difficult, it probably means that the used drill bit is worn (the drilled diameter is too small or the dust remains inside the hole). It is then necessary to use a new drill bit or better clean the hole. Hollow bricks and cellular concrete should only be drilled without hammering (ideally with a specially designed drill bit).
- The installation should be performed with an electric screwdriver (maximum 350 rpm!, ideally with electronic regulator) and the setting tool BRAVOLL MPS (Torx 30).
- Stop screwing when the washer becomes flush or between 0 and 2 mm below the surface of the insulation material.
- 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°C.

Countersunk installation



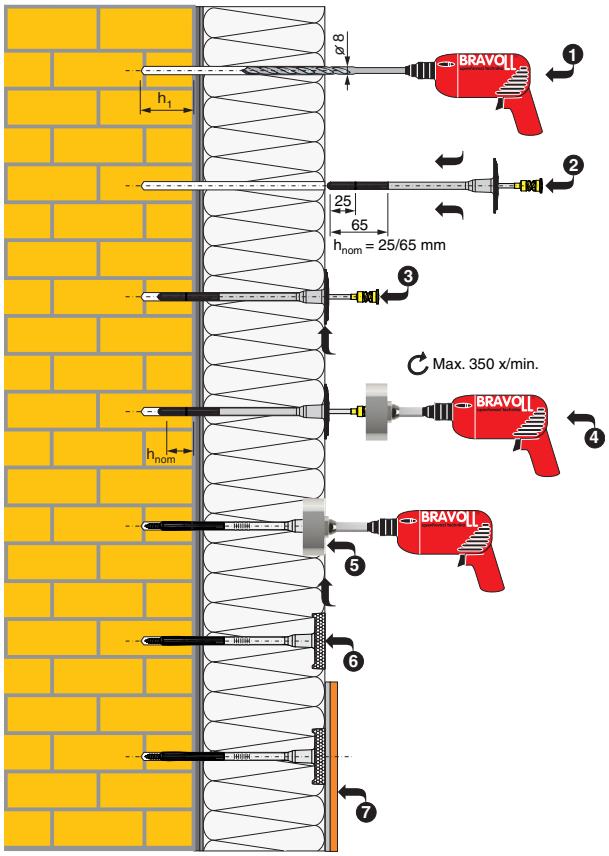
- Assemble the countersunk accessory BRAVOLL ZP with the anchor, so that it comes in contact with the bottom of the anchor plate.
- Insert the anchor and the BRAVOLL ZP accessory together into the drilled hole. Gently press the teeth into the insulation material.
- Shall the anchor setting be difficult, 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 must be done with the BRAVOLL MPS setting tool and an electrical screwdriver with electronic regulation (at a maximum speed of 350 rpm!).
- Drive the screw until the red depth plate of the BRAVOLL MPS setting tool comes into contact with the insulation material.
- Insert the BRAVOLL IZ insulation cap in to the shaped cavity, and level it off with the insulation material surface.
- When levelling out surface unevenness, make sure to respect the minimum embedment depth.
- Installation must be done at a minimum temperature of 0° C.

Countersunk installation with ZPS



- Insert the anchor into the predrilled hole. 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 must be done with the BRAVOLL ZPS setting tool and an electrical screwdriver with electronic regulation (at a maximum speed of 350 rpm!).
- Drive the screw until the surface of BRAVOLL ZPS with red narrows and „STOP“ comes to the level of the surface of insulation material.
- Insert the BRAVOLL IZ insulation cap in to the shaped cavity, and level it off with the insulation material surface.
- When levelling out surface unevenness, make sure to respect the minimum embedment depth.
- Installation must be done at a minimum temperature of 0° C.

Countersunk installation with ZPR



- Insert the anchor into the predrilled hole. 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 must be done with the BRAVOLL ZPR setting tool and an electrical screwdriver with electronic regulation (at a maximum speed of 350 rpm!).
- Drive the screw until the surface of BRAVOLL ZPR with red narrows and „STOP“ comes to the level of the surface of insulation material.
- Insert the BRAVOLL IZ insulation cap in to the shaped cavity, and level it off with the insulation material surface.
- When levelling out surface unevenness, make sure to respect the minimum embedment depth.
- Installation must be done at a minimum temperature of 0° C.

Accessories - BRAVOLL® IZ

Picture

Description

Insulation cap from expanded polystyrene or mineral wool against thermal bridges and for a uniform surface finish (countersunk installation) in external wall insulation systems (ETICS).

Technical data

Diameter:	65 mm
Material:	EPS, MW

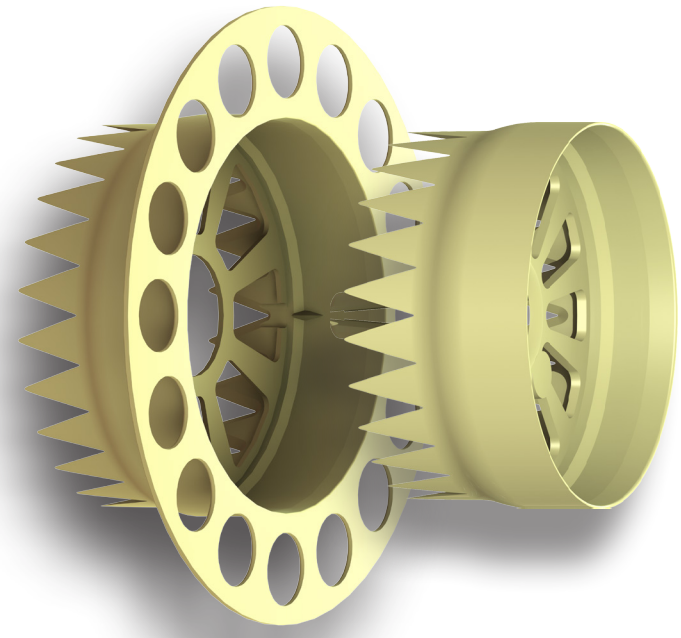
Features

- removal of unwished visual problems on facades
- special centering point for precise setting
- perfectly fits on the anchor plate and the insulation board

Product type	Code (pc)	Qty per box (pcs)
Insulation cap IZ - EPS white	11682	100
Insulation cap IZ - EPS grey	11683	100
Insulation cap IZ - MW	10297	100

Accessories - BRAVOLL® ZP, ZT100

Picture



ZT100 ZP

Description

Countersunk accessory BRAVOLL ZP and countersunk extension washer BRAVOLL ZT100 for the countersunk installation of screw-in anchors BRAVOLL PTH-S and SX for fixing insulation material boards in external wall insulation systems (ETICS).

Technical data

ZP diameter:	65 mm
ZT100 diameter:	100 mm
Material ZP, ZT100:	Fibre glass reinforced polyamide

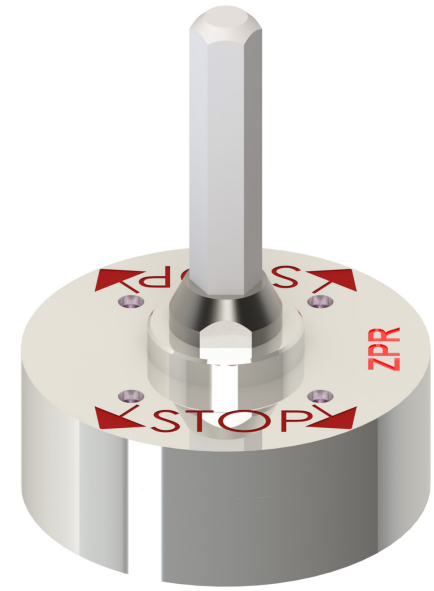
Features

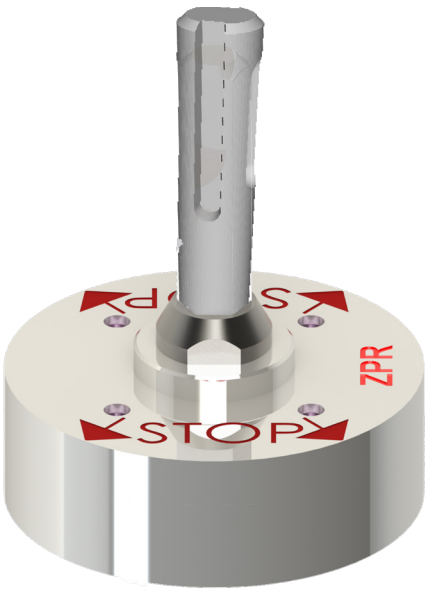
- Removal of unwanted visual defects on facades
- Thermal bridge limitation

Product type	Code (pc)	Qty per box (pcs)
ZP countersunk accessory	11686	100
ZT100 countersunk washer	11687	100

Accessories - BRAVOLL® ZPR, ZPR SDS

Picture





Description

Setting tool ZPR - for countersunk installation of screw-in anchors in contact insulation systems (ETICS).

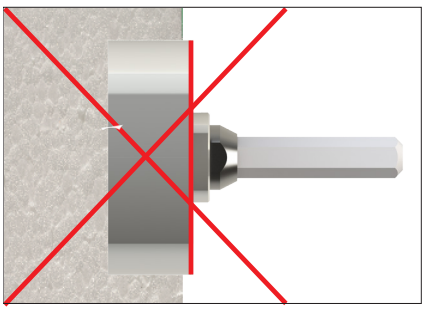
Technical data

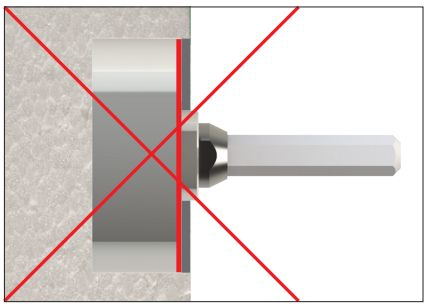
Screwing bit:	TORX® T30
Shank ZPR:	hexagonal 10 mm
Shank ZPR SDS:	SDS - plus
Material:	Alluminium, steel

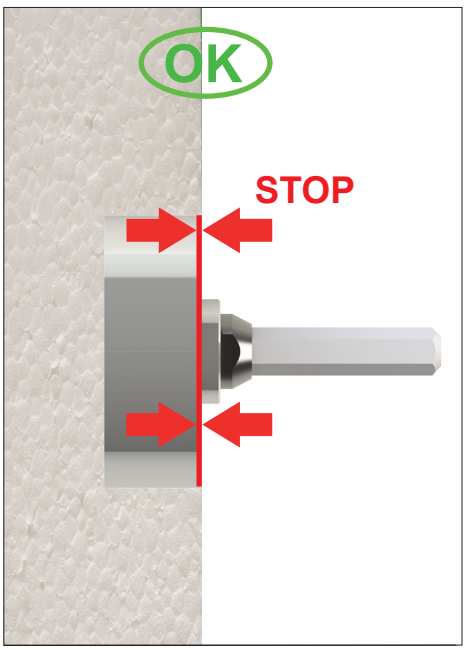
Features

- cleanliness during application - no waste of EPS, MW!
- precise and uniform setting of insulation anchor plates into the isulation material boards - eliminates all unwished visual problems on facades
- low weight of the setting tool
- very simple and easy-to-use tool

Product	order number	pc
ZPR	12297	1
ZPR SDS	12305	1







Accessories - BRAVOLL® ZPS

Picture

Description

Setting tool ZPS for countersunk installation of screw-in anchors in contact insulation systems (ETICS).

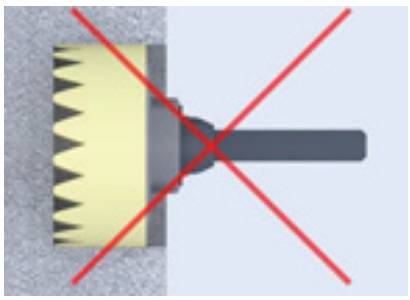
Technical data

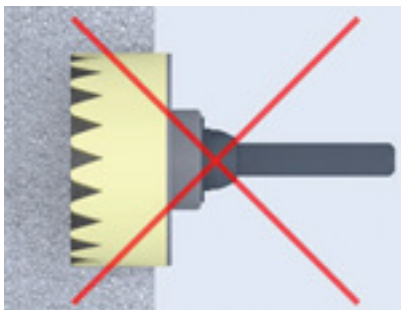
Screwing bit:	TORX® T30
Shank:	hexagonal 10 mm
Material:	Alluminium, steel, PP

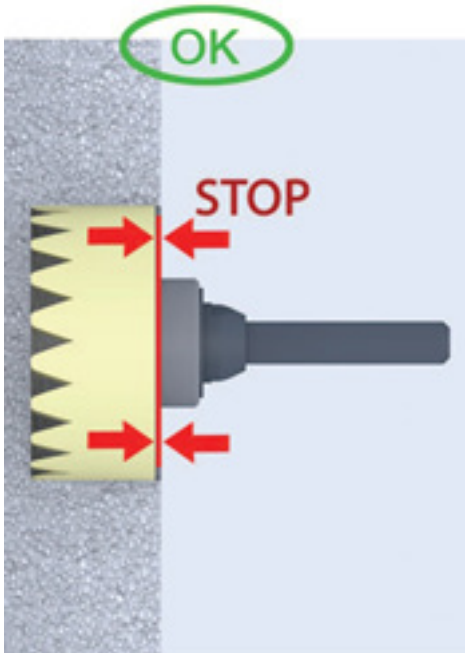
Advantages

- precise and uniform setting of insulation anchor plates into the isulation material boards - eliminates all unwished visual problems on facades
- low weight of the setting tool
- very simple and easy-to-use tool

Product	order number	pc(s)
ZPS	11440	1
Spare crown	11443	5

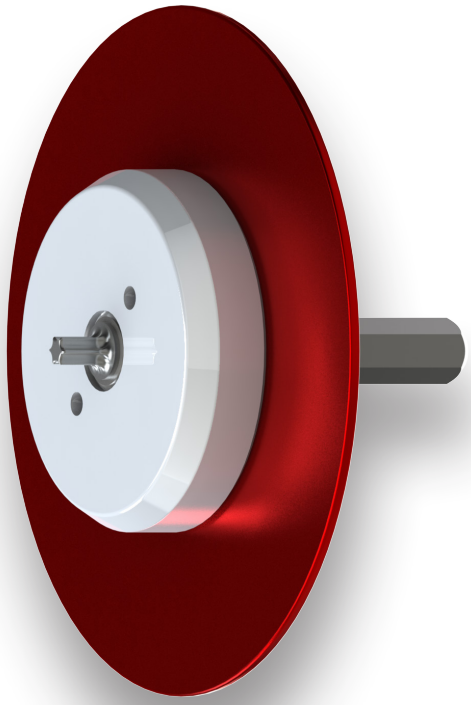






Příslušenství - BRAVOLL® MPS

Picture



Description

Double-sided setting tool for the surface and countersunk installation of screw-in anchors in external wall insulation systems (ETICS).

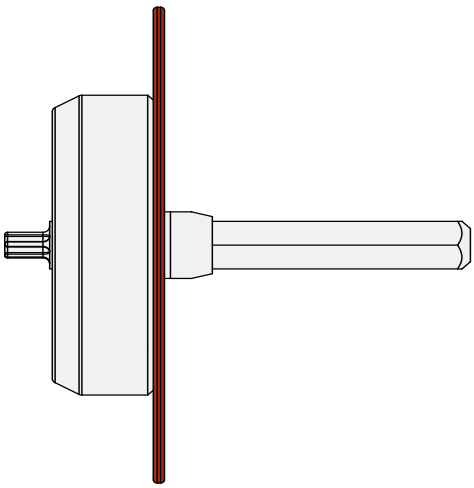
Technical data

Screwing bit:	TORX® T30
Shank:	10 mm hexagonal
Material:	Aluminium, steel

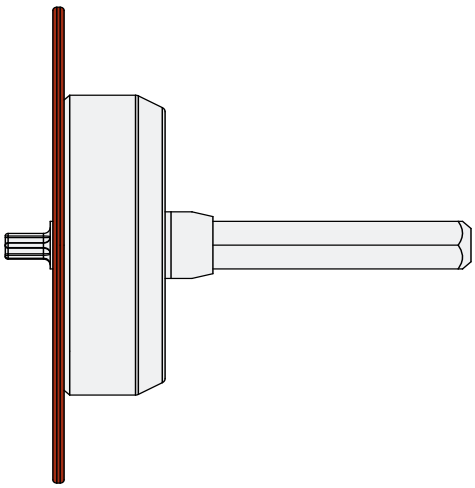
Features

- Precise and uniform setting of insulation anchor pla tes into the insulation material boards - eliminates all unwished visual problems on facades.
- Very simple and easy-to-use tool
- Double-sided for both surface and countersunk in stallation
- very light and ergonomical

Product type	Code	Qty per box
Setting tool MPS	11689	1



MPS - Surface installation



MPS - Countersunk installation