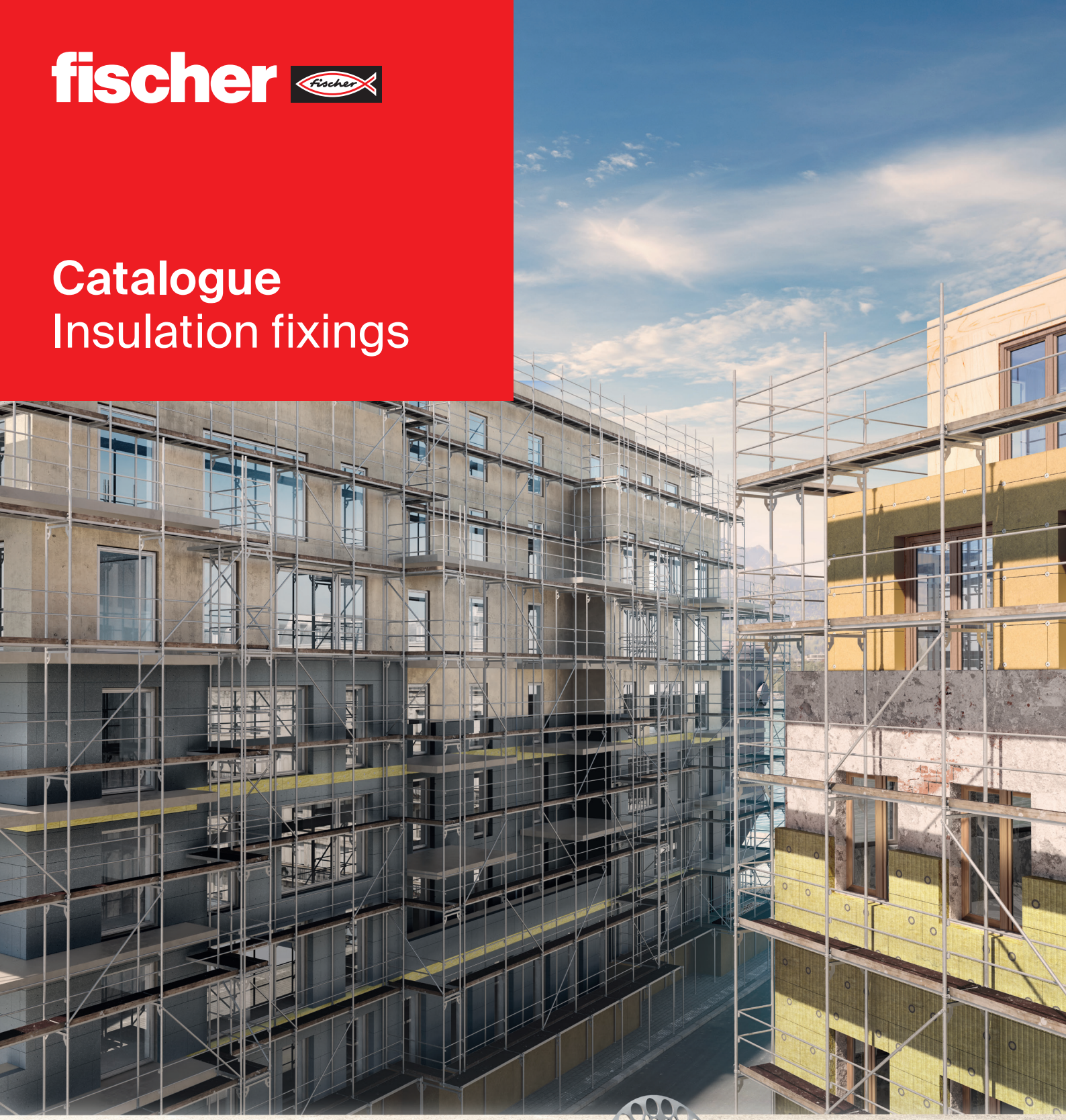
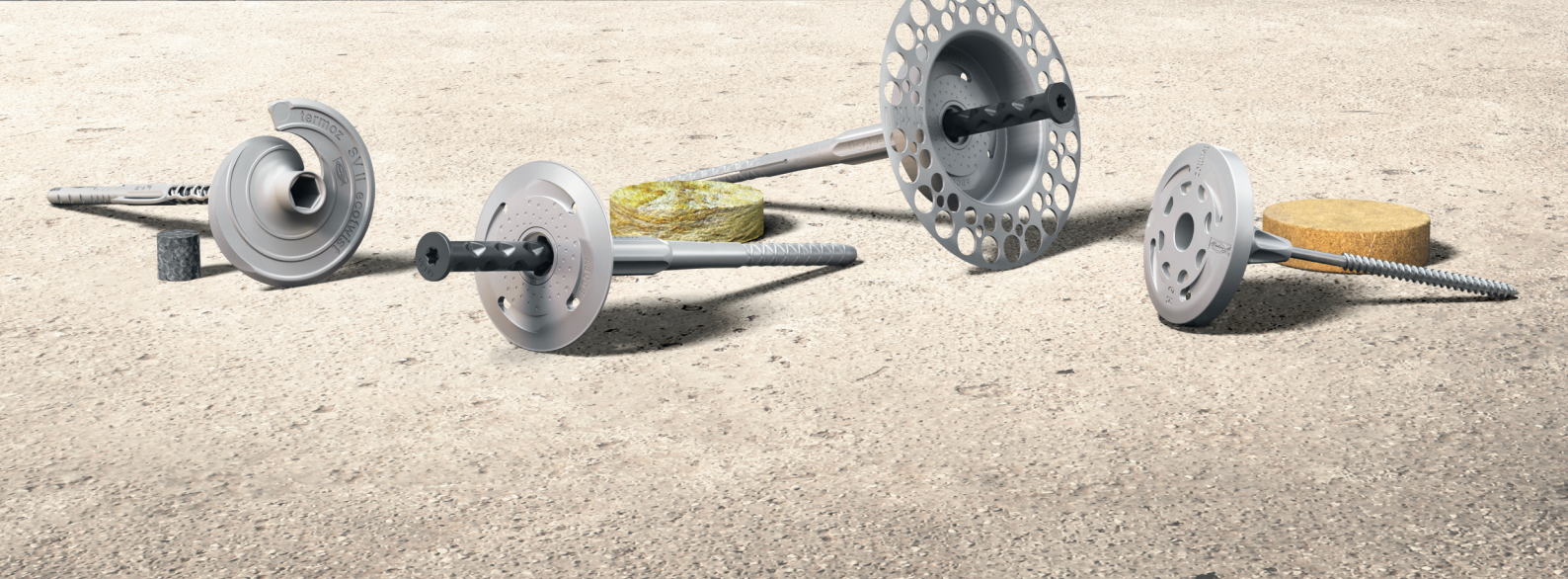
fischer

Catalogue
Insulation fixings





Foreword

Dear business partners,

for more than 75 years, the fischer Group of Companies has been synonymous with the highest levels of innovation and quality. In addition to plastic plugs, steel anchors and chemical fixing systems, our extensive product portfolio includes custom fastenings tailored to your applications. We also offer a wide range of EWI (external wall insulation) products and services. Our comprehensive EWI range allows you to innovatively and securely increase the energy efficiency of buildings while lowering maintenance costs and contributing to climate-neutral housing.

The advantages to you, our partners, are always our top priority, as our practical and custom EWI fixing solutions increase the efficiency and cost-effectiveness of installation, provide added safety and fulfil demanding structural requirements.

Our range includes insulation fixings for external thermal insulation composite systems (ETICS) and rear-ventilated rainscreen facades. We offer the best solutions with European Technical Assessments (ETAs) for various insulation materials and thicknesses, anchor substrates and fire protection and system requirements. Our extensive range further encompasses drive anchors and screw fixings as well as special anchorages and other innovative solutions to fasten insulation. Our installation elements and stand-off installation systems further allow fixtures to be securely fastened to ETICS with virtually no thermal bridging.

Dear partners, the following pages of our new EWI catalogue provide an overview of our versatile range of products and services, allowing you to find the right ETICS and facade fastening solutions quickly and easily.

We hope you enjoy reading our new EWI catalogue and using our products and services.

Andreas Voll
CEO of the fischer Group of Companies

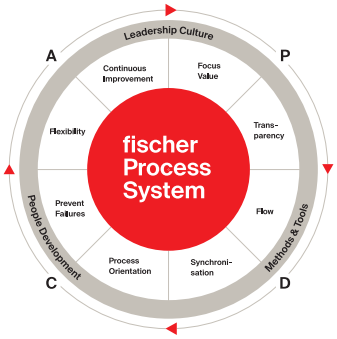
“Whoever chooses fischer receives more than a range of safe products. The aim is to always develop the best solutions for our customers across the globe.”

Besides the innovative products, this predominantly concerns support that is focused on the customer, and services designed to improve customer benefit.

A brand and its promise to perform.

Continuous improvement

With the fischer ProzessSystem (fPS) we ensure that we are adapting and optimising our processes in line with customer requirements in a flexible manner and on a continuous basis.



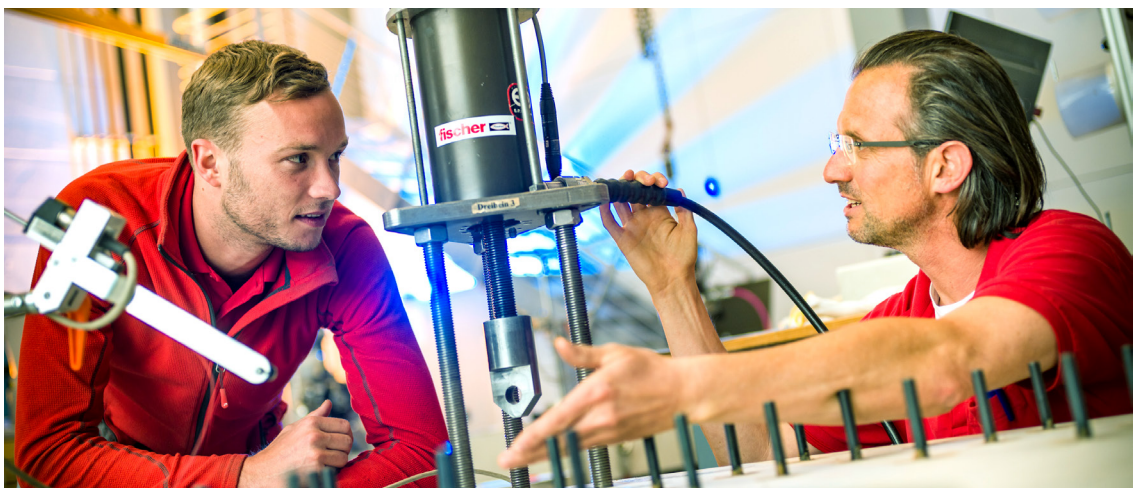
Safety that connects. Decisive quality

We don’t make any compromises when it comes to the safety of our products. A whole host of our products are distinguished by comprehensive, up-to-date and international approvals. The fischer product range is well-positioned in all sectors of fixing technology – Steel, Nylon and Chemical fixings. In awardwinning quality which continues to impress both professional clients and private customers with equal measure.

ICC ES ESR-1990 See ICC-ES Evaluation Report at www.icc-es.org

ETA CE

International approvals characterise many of our products.



Always on the pulse of time

At fischer, innovation is more than just the sum of the patents. We are open to new things and are prepared for change – always with the aim of offering our customers the greatest possible benefits. Over the years, our own development and production sites have been developing numerous fixing solutions for the most wide-ranging applications. Be it new production procedures or materials, such as renewable raw materials: We are carrying out the research for your safety and will continue to do so in the future. This gives us such great flexibility that we can even develop tailor-made customer solutions. This power to innovate has seen fischer become a market leader in anchor technology and the fixing industry.

Our service to you

We are a reliable partner, one that will stand at your side and address your individual requirements with advice and action:

- Our products range from chemical systems to steel anchors through to plastic anchors.
- Competence and innovation through own research, development and production.
- Global presence and active sales service in over 100 countries.
- Qualified technical consulting for economical and compliant fastening solutions. Also on-site at the construction site requested.
- Training sessions, some with accreditation, at your premises or at the fischer academy.
- Design and construction software for demanding applications.

We take responsibility

Our active environment management policy means that we are helping to maintain an intact environment for our generation and for those that follow. The environment management policy at the Tumlingen site has been certified in line with DIN EN ISO 14001.
It fills us with particular pride that in 2020 we have received the most important and largest award in Europe in the field of sustainability: the German Sustainability Award - category large companies.
This was in recognition of our holistic approach and the strategic anchoring of our sustainability management.
With our greenline products we have launched the first range of fixings on the market that is based on renewable raw materials to more than 50%.

German Sustainability Award

Plus X Award – Sustainability

GreenLine assortment based on 50% regrowing raw materials

German Green Brand Award

Lean & Green Management Award 2022


Termoz

Innovations to inspire professionals.

Content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1 Selection guide

Plug finder.

Plug finder			Installation type			Insulation material					
Product picture	Product description	Plate diameter [mm]	Flush with surface	Countersunk	Deep countersunk	Expanded polystyrene (EPS)	Extruded polystyrene (XPS)	Polyurethane rigid foam (PUR)	Phenolic resin rigid foam (Resol)	Mineral wool	Wood fibre
Screw fixings for solid and hollow building materials											
	TermoZ CS II	60	●	●*	–						
	TermoZ CS II DT 110 V	110	–	●*	–						–
	TermoZ SV II Ecotwist	66	–	–	●*						–
Screw fixings for wood and board materials											
	TermoZ 6H	60	●	●*	–						
	TermoFix 6H-NT	60	●	–	–						
	TermoFix B	60	●	–	–						
Hammerset fixings for solid and hollow building materials											
	TermoZ CNplus	60	●	●*	–						
	TermoZ CN 8	60	●	–	–						
	TermoZ PN	60	●	–	–						

● suitable
●* suitable with compatible setting tool
– not suitable

Ceiling soffits & fire bar		Building material classes							Approval		Page
Ceiling soffits	Fire bar	A (Concrete)	B (Masonry from solid bricks)	C (Masonry from hollow or perforated bricks)	D (Light-weight aggregate concrete)	E (Aerated concrete)	Wood and panel building materials	Sheets	ETA	EPD	
●	●	●	●	●	●	●	–	–	●	●	18
–	●	●	●	●	●	●	–	–	●	●	23
–	–	●	●	●	●	●	–	–	●	●	26
–	–	–	–	–	–	–	●	–	–	●	32
–	–	–	–	–	–	–	●	–	–	●	35
–	–	–	–	–	–	–	–	●	–	●	38
–	●	●	●	●	●	●	–	–	●	●	42
–	–	●	●	●	●	●	–	–	●	●	47
–	–	●	●	●	●	●	–	–	●	●	50

Calculation of the correct plug dimension.

Screw fixings				Hammerset fixings			Calculation examples:		
TermoZ CS II 	TermoZ CS II DT 110 V 	TermoFix 6H-NT 	TermoZ 6H 	TermoZ PN 8 	TermoZ CN 8 	TermoZ CNplus 8 	e.g. 1: CS II in anchoring ground A-E	e.g. 2: CNplus in anchoring ground A-D	e.g. 3: CNplus in anchoring ground A-D
Anchorage depth (mm)							**Anchorage depth (mm)**		
25 (A-E), optional 45 (E)	25 (A-E), optional 45 (E)	30 (Holz)	24 (Holz)	35 (A-D), 55 (E)	35 (A-D), 55 (E)	35 (A-D), 55 (E)	25	35	35
Non-load-bearing layer in mm: e.g. New building = 0 mm; e.g. Refurbishment: Old plaster = 30 mm							0 New building	30 Old building	0 New building
+							+	+	+
Adhesive layer in mm: approx. 10mm (depending on unevenness)							10	10	10
+							+	+	+
Insulation thickness in mm; e.g. 140 mm							140	140	140
=							=	=	=
Minimum dimension to be selected							175	215	185
↓							↓	↓	↓
Plug recommendation							**TermoZ CS II 8/175**	**TermoZ CNplus 8/230**	**TermoZ CNplus 8/190**

Screw fixings for solid and hollow building materials.

TermoZ CS II
The strong screw fixing for all insulation materials and substrates

Certificates / Features

Insulation thicknesses: 60-420mm
Installation: Flush with surface or countersunk
Expansion element: Steel compound screw
Chi value [W/K]: 0,000-0,002

TermoZ CS II DT 110 V
The strong countersunk screw fixing for soft insulating boards

Certificates / Features

Insulation thicknesses: 80-420mm
Installation: countersunk
Expansion element: Steel compound screw
Chi value [W/K]: 0,000-0,002

TermoZ SV II Ecotwist
The innovative countersinkable ETICS fixing for all building material classes

Certificates / Features

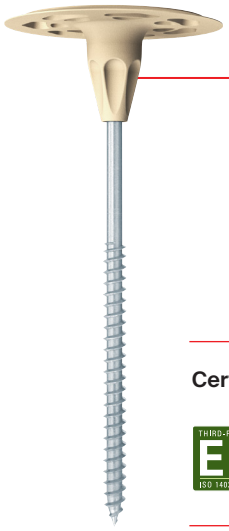
Insulation thicknesses: 100-400mm
Installation: Deep countersunk
Expansion element: Steel screw
Chi value [W/K]: 0,000 (>240mm)

Screw fixings for wood and board materials

TermoZ 6H
The efficient countersunk ETICS fixing for board materials

Certificates / Features

Insulation thicknesses: 40-280mm
Installation: Flush with surface or countersunk
Screw version: Steel screw gvz. or A2
Chi value [W/K]: 0,000-0,001



TermoFix 6H-NT
The ETICS screw fixing for board materials with approved screw

Certificates / Features

Insulation thicknesses: 30-280
Installation: Flush with surface
Screw version: Steel screw gvz.
Chi value [W/K]: 0,000 - 0,002

TermoFix B
The ETICS screw fixing with Delta Seal-coated drill screw for sheet metal subsurfaces

Certificates / Features

Insulation thicknesses: 40-160mm
Installation: Flush with surface
Screw version: Steel screw with Delta-Seal coating

Hammerset fixings for solid and hollow building materials

TermoZ CNplus
The premium ETICS hammerset fixing with the option to be screwed in

Certificates / Features

Insulation thicknesses 60-340mm
Installation: Flush with surface or countersunk
Expansion element: Steel compound nail for 40%
Steel content in the insulation material
Chi value [W/K]: 0,000-0,0002

TermoZ CN 8
The high-performance ETICS hammerset fixing with compound nail

Certificates / Features

Insulation thicknesses: 60-340mm
Installation: Flush with surface
Expansion element: Steel compound nail
Chi value [W/K]: 0,000-0,001

TermoZ PN 8
The thermal bridge-free ETICS hammerset fixing with GRP-nail

Certificates / Features

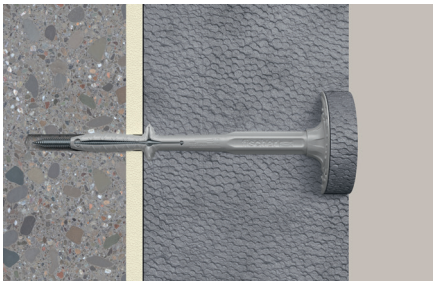
Insulation thicknesses: 60-180mm
Installation: Flush with surface
Expansion element: Plastic nail
Chi value [W/K]: 0,000

2

Screw fixings for solid and hollow building materials

TermoZ CS II

The strong screw fixing for all insulation materials and substrates



Countersunk installation of polystyrene boards on concrete

TermoZ CS II at ceiling soffits

Applications

- Attachment of ETICS insulating boards on concrete and masonry
- Flush installation in all conventional insulation materials
- Countersunk installation of insulation materials such as polystyrene rigid foam panels and dense mineral wool panels
- Fixing of ETICS insulating boards for new buildings and energetic building renovations
- The screw fixing is also approved for fixing ETICS to ceiling soffits.

Advantages

- Due to the steel compound screw of the TermoZ CS II, all facade insulations including the fire bar can be fastened securely.
- The setting tool is used to countersink the anchor optimally, resulting in an even plaster layer without anchor marks.
- Due to the special expansion zone of the anchor sleeve the TermoZ CS II is the first insulation anchor with an approval for hammer-drilled holes in vertically perforated bricks.
- The plate design and the sleeve labeling allow correct and intuitive application.
- The closed plate does not allow dirt to be ejected and thus ensures a clean setting result.
- The special geometry of the underhead plate reduces the necessary insertion torque for convenient and fast installation.

Certificates / Features

ETA-14/0372, for concrete, masonry, lightweigth aggregate concrete and autoclaved aerated concrete

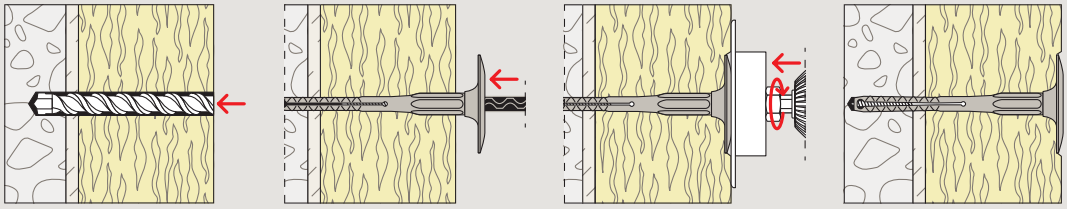
Building materials

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

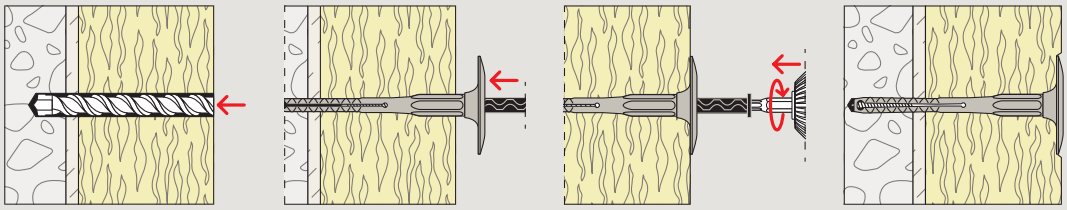
Functioning

- The fixing is pushed through the insulation into the drill hole and is screwed in. For ceiling soffits, the installation is carried out through the reinforcing layer and insulation.
- For countersunk mounting, the setting tool TermoZ CS is required.
- Optionally, the setting tool TermoZ CS can also be used for flush installation by turning the stopping disc.
- When using the setting tool, the installation is completed when the stopping disc is flush with the insulation panel.
- For countersunk mounting the anchor plate needs to be covered with a round cap.
- For a surface-flush setting, a round cap is not necessary.

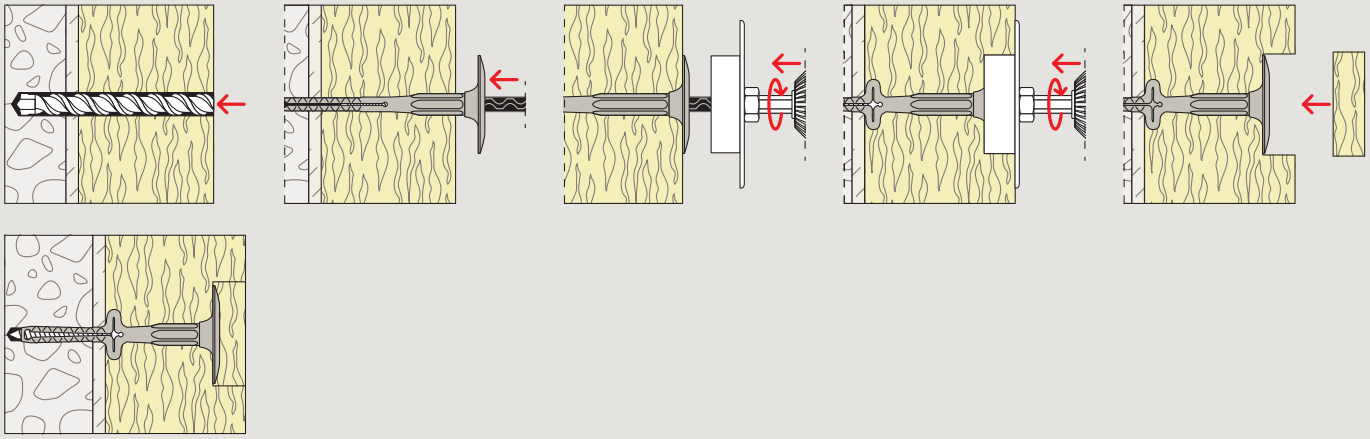
Flush to surface installation with setting tool CS



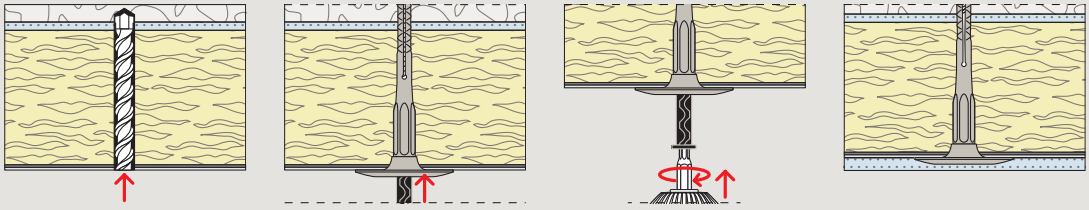
Flush to surface installation with Bit TX30

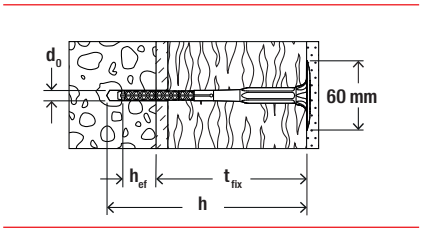


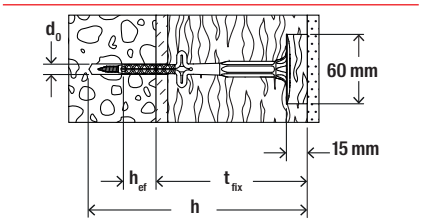
Countersunk installation with setting tool CS



Installation on ceiling soffits







Technical data

TermoZ CS II

TermoZ CS II

TermoZ CS II 8/275-8/455

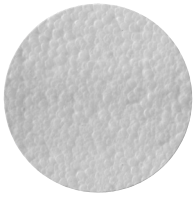
Item	Item no.	Approval ETA	Drill diameter d_0 [mm]	Effect. anchorage depth h_{ef} [mm]	Max. usable length at surface-flush installation t_{fix} [mm]	Min. total drill whole depth incl. insulation at surface flush installation h [mm]	Max. usable length at countersunk installation t_{fix} [mm]	Min. total drill whole depth incl. insulation at countersunk installation h [mm]	Drive	Sales unit [pcs]
TermoZ CS II 8/95	**564146**[1]	●	8	25	70	110	–	–	TX30	100
TermoZ CS II 8/115	**564147**	●	8	25	90	130	90	145	TX30	100
TermoZ CS II 8/135	**559107**	●	8	25	110	150	110	165	TX30	100
TermoZ CS II 8/155	**559108**	●	8	25	130	170	130	185	TX30	100
TermoZ CS II 8/175	**559109**	●	8	25	150	190	150	205	TX30	100
TermoZ CS II 8/195	**559110**	●	8	25	170	210	170	225	TX30	100
TermoZ CS II 8/215	**559111**	●	8	25	190	230	190	245	TX30	100
TermoZ CS II 8/235	**559112**	●	8	25	210	250	210	265	TX30	100
TermoZ CS II 8/255	**559113**	●	8	25	230	270	230	285	TX30	100
TermoZ CS II 8/275	**564148**	●	8	25	250	290	250	305	TX30	100
TermoZ CS II 8/295	**564149**	●	8	25	270	310	270	325	TX30	100
TermoZ CS II 8/315	**564150**	●	8	25	290	330	290	345	TX30	100
TermoZ CS II 8/335	**564151**	●	8	25	310	350	310	365	TX30	100
TermoZ CS II 8/355	**564152**	●	8	25	330	370	330	385	TX30	100
TermoZ CS II 8/375	**564153**	●	8	25	350	390	350	405	TX30	100
TermoZ CS II 8/395	**566425**	●	8	25	370	410	370	425	TX30	100
TermoZ CS II 8/415	**566426**	●	8	25	390	430	390	445	TX30	100
TermoZ CS II 8/435	**566427**	●	8	25	410	450	410	465	TX30	100
TermoZ CS II 8/455	**566428**	●	8	25	430	470	430	485	TX30	100

[1] Not for countersunk installation.

Accessories

Accessories TermoZ CS II

Round cap MW D63,5

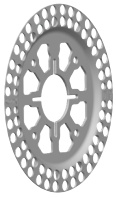


Round cap PS D60 white

Round cap PS D60 grey

Setting tool CS (hexagonal-adapter)

Setting tool CS (SDS-adapter)



DT 90, DT 110, DT 140

Item	Item no.	Match	Contents	Sales unit [pcs]
Round cap MW 63,5	**525654**	–		100
Round cap PS 60 white	**046173**	–		100
Round cap PS 60 grey	**544383**	–		100
Setting tool CS (hexagonal-adapter)	**532618**	–	Including Bit TX30	1
Setting tool CS (SDS-adapter)	**532619**	–	Including Bit TX30	1
Bit TX30 CS 26 mm	**533761**	Setting tool CS		1
DT 90	**008889**	–		100
DT 140	**008690**	–		100
DT 110	**090745**	–		100

Loads

TermoZ CS II

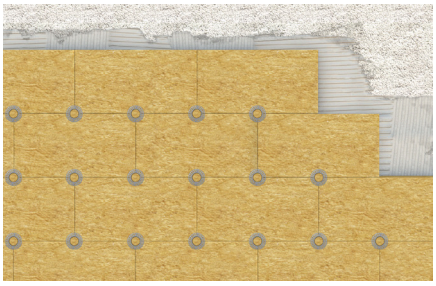
Permissible tension loads for a single anchor[1) 2)] for multiple use for non-structural applications.
For the design the complete current assessment ETA-14/0372 has to be considered.

						Beton und Mauerwerk		
Base material	Brick raw density ρ [kg/dm³]	Minimum compressive brick strength f_b [N/mm²]	Effektive Verankerungstiefe h_{ef} ≥ [mm]	Depth of drill hole[3)] $h_{1,Flush}$ / $h_{1,CSK}$ [mm]	Minimum member thickness h_{min} [mm]	Permissible tension load[1)] N_{perm} [kN]	Minimum spacing[4)] s_{min} [mm]	Minimum edge distance[4)] c_{min} [mm]
Concrete	-	≥ C12/15	25	40 / 55	100	0.50	100	100
	-	≤ C50/60	25	40 / 55	100	0.50	100	100
Weather resistant concrete shell	-	≥ C20/25	25	40 / 55	≥ 40	0.50	100	100
Solid clay bricks e.g. acc. to DIN EN 771-1:2015, Mz	≥ 1.8	20	25	40 / 55	100	0.50	100	100
Calcium silicate solid bricks, e.g. acc. to DIN EN 771-2:2015, KS	≥ 1.4	20	25	40 / 55	100	0.50	100	100
	≥ 1.4	12	25	40 / 55	100	0.50	100	100
Solid lightweight concrete block, e.g. acc. to DIN EN 771-3:2015, Vbl	≥ 1.4	8	25	40 / 55	100	0.40	100	100
Solid concrete block, e.g. acc. to DIN EN 771-3:2015, Vbn	≥ 2.0	20	25	40 / 55	100	0.50	100	100
	≥ 2.0	12	25	40 / 55	100	0.50	100	100
Vertically perforated clay bricks e.g. acc. to DIN EN 771-1:2015, HLz	≥ 0.9	12	25	40 / 55	100	0.22	100	100
	≥ 0.9	12	25	40[5)] / 55[5)]	100	0.33	100	100
	≥ 1.6	48	25	40 / 55	100	0.50	100	100
	≥ 1.6	48	25	40[5)] / 55[5)]	100	0.50	100	100
Hollow calcium silicate brick, acc. to DIN EN 771-2:2015, KSL	≥ 1.4	12	25	40 / 55	100	0.50	100	100
Hollow brick lightweight concrete, e.g. acc. to DIN EN 771-3:2015 Hbl	≥ 0.9	4	25	40 / 55	100	0.17	100	100
Hollow brick concrete, e.g. acc. to DIN EN 771-3:2015 Hbn	≥ 1.2	10	25	40 / 55	100	0.50	100	100
	≥ 1.2	8	25	40 / 55	100	0.50	100	100
	≥ 1.2	6	25	40 / 55	100	0.37	100	100
	≥ 1.2	4	25	40 / 55	100	0.25	100	100
Lightweight aggregate concrete acc. to DIN EN 1520:2011-6, LAC	≥ 0.9	6	25	40 / 55	100	0.50	100	100
	≥ 0.9	6	25	40 / 55	100	0.50	100	100
Autoclaved aerated concrete blocks, e.g. AAC acc. to DIN EN 771-4:2015	≥ 0.5	4	25	40[5)] / 55[5)]	100	0.22	100	100
	≥ 0.5	4	45	60[5)] / 75[5)]	100	0.37	100	100

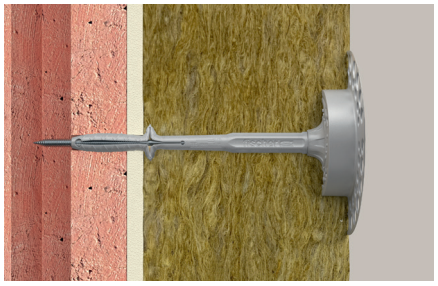
[1)] Plastic anchor for fixing of external thermal insulation composite systems with rendering acc. to ETA data. Only tension wind loads are permitted. The partial safety factors for material resistance as regulated in the assessment as well as a partial safety factor for load actions of γ_L = 1.5 are considered.
[2)] The given loads are valid for installation and use of fixations in dry base material for temperatures in the substrate up to +24 °C (resp. short term up to +40 °C).
[3)] Depth of the drilled hole to the deepest point for flush or countersunk installation. Drilling method Hammer drilling. For details on installation data, see ETA.
[4)] Minimum possible axial spacing and edge distances acc. to ETA.
[5)] Rotary drilling.

TermoZ CS II DT 110 V

The strong countersunk screw fixing for soft insulating boards



Fixing of mineral wool boards on concrete



Countersunk installation in mineral wool boards

Applications

- Countersunk installation of soft insulation materials such as mineral wool boards on concrete and masonry

Advantages

- Fastest installation due to pre-assembled 110 mm countersunk plate.
- The compound screw minimises thermal bridges, thus there are no anchor marks on the façade.
- The combination of the advantages of countersunk installation and additional plates achieves a homogeneous surface with higher pull-through values at the same time.
- The very thin plate edge provides an optimal fit to the insulation board and the application of thin reinforcement layers.
- Due to the special expansion zone of the anchor sleeve the TermoZ CS II is the first insulation anchor with an approval for hammer-drilled holes in vertically perforated bricks.
- The closed plate does not allow dirt to be ejected and thus ensures a clean setting result.
- The special geometry of the underside of the plate reduces the necessary insertion torque for convenient and fast installation.

Certificates / Features

ETA-14/0372, for concrete, masonry, lightweigth aggregate concrete and autoclaved aerated concrete

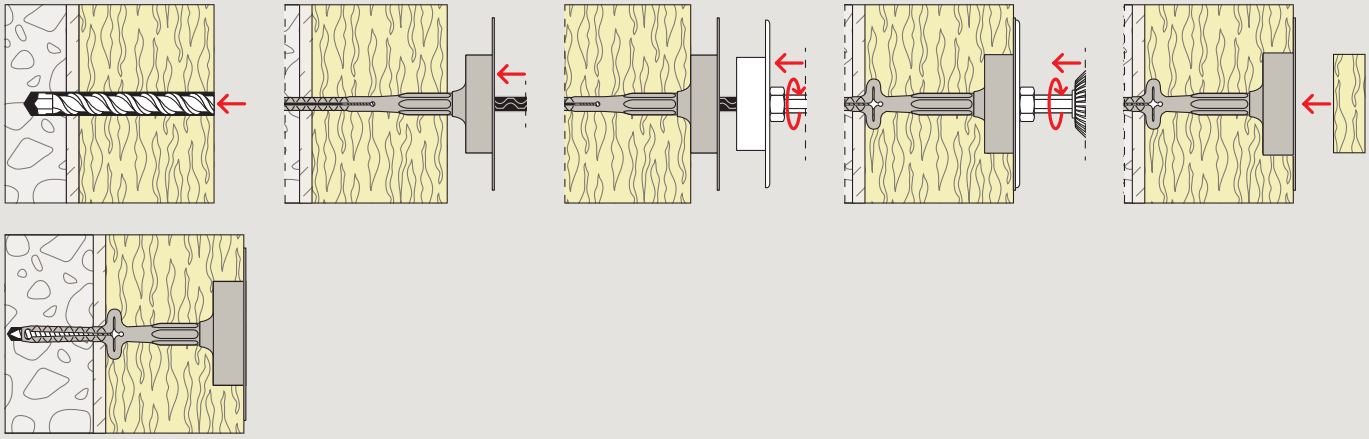
Building materials

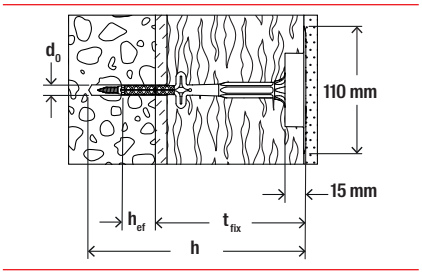
- Building material classes A, B, C, D, E
- Concrete
- Building brick
- Solid sand-lime brick
- Lightweight concrete
- Weather shell
- Vertically perforated brick
- Perforated sand-lime brick
- Hollow blocks made from lightweight concrete
- Lightweight aggregate concrete
- Aerated concrete

Functioning

- The fixing is set in push-through installation
- Simple, fast setting by driving the GRP plug in using a hammer. This drives the steel nail into the shank and the fixing becomes anchored in the base
- Non load bearing layers such as adhesive and old plaster are included in the maximum useful length

Countersunk installation of TermoZ CS II DT 110 V with setting tool CS





Technical data

TermoZ CS II DT 110 V

TermoZ CS II DT 110 V

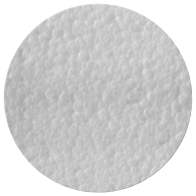
TermoZ CS II DT 110 V 8/275-8/455

Item	Item no.	Approval ETA	Drill diameter d_0 [mm]	Effect. anchorage depth h_{ef} [mm]	Max. usable length at countersunk installation t_{fix} [mm]	Min. total drill whole depth incl. insulation at countersunk installation h [mm]	Drive	Sales unit [pcs]
TermoZ CS II 8/115 DT 110 V	564155	●	8	25	90	145	TX30	100
TermoZ CS II 8/135 DT 110 V	559411	●	8	25	110	165	TX30	100
TermoZ CS II 8/155 DT 110 V	559412	●	8	25	130	185	TX30	100
TermoZ CS II 8/175 DT 110 V	559413	●	8	25	150	205	TX30	100
TermoZ CS II 8/195 DT 110 V	559414	●	8	25	170	225	TX30	50
TermoZ CS II 8/215 DT 110 V	559415	●	8	25	190	245	TX30	50
TermoZ CS II 8/235 DT 110 V	559416	●	8	25	210	265	TX30	50
TermoZ CS II 8/255 DT 110 V	559417	●	8	25	230	285	TX30	50
TermoZ CS II 8/275 DT 110 V	564156	●	8	25	250	305	TX30	50
TermoZ CS II 8/295 DT 110 V	564157	●	8	25	270	325	TX30	50
TermoZ CS II 8/315 DT 110 V	564158	●	8	25	290	345	TX30	50
TermoZ CS II 8/335 DT 110 V	564159	●	8	25	310	365	TX30	50
TermoZ CS II 8/355 DT 110 V	564160	●	8	25	330	385	TX30	50
TermoZ CS II 8/375 DT 110 V	564161	●	8	25	350	405	TX30	50
TermoZ CS II 8/395 DT 110 V	566429	●	8	25	370	425	TX30	50
TermoZ CS II 8/415 DT 110 V	566430	●	8	25	390	445	TX30	50
TermoZ CS II 8/435 DT 110 V	566431	●	8	25	410	465	TX30	50
TermoZ CS II 8/455 DT 110 V	566432	●	8	25	430	485	TX30	50

Accessories

Accessories CS II 8 DT 110V

Round cap MW D63,5



Round cap PS D60 white

Round cap PS D60 grey

Setting tool CS (hexagonal-adapter)

Setting tool CS (SDS-adapter)

Item	Item no.	Match	Contents	Sales unit [pcs]
Round cap MW 63,5	525654	–		100
Round cap PS 60 white	046173	–		100
Round cap PS 60 grey	544383	–		100
Setting tool CS (hexagonal-adapter)	532618	–	Including Bit TX30	1
Setting tool CS (SDS-adapter)	532619	–	Including Bit TX30	1
Bit TX30 CS 26 mm	533761	Setting tool CS		1

Loads

TermoZ CS II DT 110V

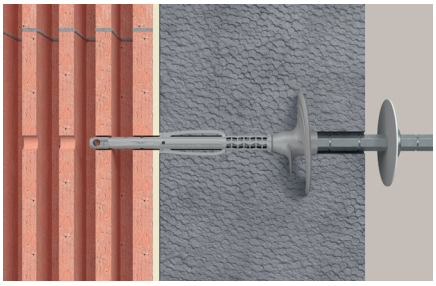
Permissible tension loads for a single anchor[1)2)] for multiple use for non-structural applications.
For the design the complete current assessment ETA-14/0372 of 03.11.2023 has to be considered.

						Beton und Mauerwerk		
Base material	Brick raw density ρ [kg/dm³]	Minimum compressive brick strength f_b [N/mm²]	Effective anchorage depth $h_{ef} \geq$ [mm]	Depth of drill hole[3)] $h_{1,CSK}$ [mm]	Minimum member thickness h_{min} [mm]	Permissible tension load[1)] N_{perm} [kN]	Minimum spacing[4)] s_{min} [mm]	Minimum edge distance[4)] c_{min} [mm]
Concrete	-	≥ C12/15	25	55	100	0.50	100	100
	-	≤ C50/60	25	55	100	0.50	100	100
Weather resistant concrete shell	-	≥ C20/25	25	55	≥ 40	0.50	100	100
Solid clay bricks e.g. acc. to DIN EN 771-1:2015, Mz	≥ 1.8	20	25	55	100	0.50	100	100
Calcium silicate solid bricks, e.g. acc. to DIN EN 771-2:2015, KS	≥ 1.4	20	25	55	100	0.50	100	100
	≥ 1.4	12	25	55	100	0.50	100	100
Solid lightweight concrete block, e.g. acc. to DIN EN 771-3:2015, Vbl	≥ 1.4	8	25	55	100	0.40	100	100
Solid concrete block, e.g. acc. to DIN EN 771-3:2015, Vbn	≥ 2.0	20	25	55	100	0.50	100	100
	≥ 2.0	12	25	55	100	0.50	100	100
Vertically perforated clay bricks e.g. acc. to DIN EN 771-1:2015, HLz	≥ 0.9	12	25	55	100	0.22	100	100
	≥ 0.9	12	25	55[5)]	100	0.33	100	100
	≥ 1.6	48	25	55	100	0.50	100	100
	≥ 1.6	48	25	55[5)]	100	0.50	100	100
Hollow calcium silicate brick, acc. to DIN EN 771-2:2015, KSL	≥ 1.4	12	25	55	100	0.50	100	100
Hollow brick lightweight concrete, e.g. acc. to DIN EN 771-3:2015 Hbl	≥ 0.9	4	25	55	100	0.17	100	100
Hollow brick concrete, e.g. acc. to DIN EN 771-3:2015, Hbn	≥ 1.2	10	25	55	100	0.50	100	100
	≥ 1.2	8	25	55	100	0.50	100	100
	≥ 1.2	6	25	55	100	0.37	100	100
	≥ 1.2	4	25	55	100	0.25	100	100
Lightweight aggregate concrete acc. to DIN EN 1520:2011-6, LAC	≥ 0.9	4	25	55	100	0.32	100	100
	≥ 0.9	6	25	55	100	0.50	100	100
Autoclaved aerated concrete blocks acc. to DIN EN 771-4:2015, AAC	≥ 0.5	4	25	55[5)]	100	0.22	100	100
	≥ 0.5	4	45	75[5)]	100	0.37	100	100

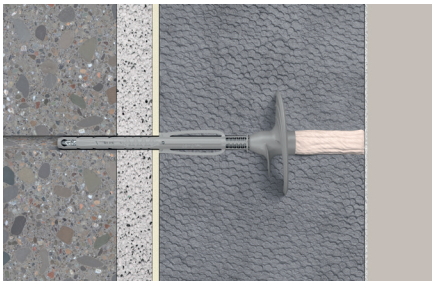
[1)] Plastic anchor for fixing of external thermal insulation composite systems with rendering acc. to ETA data. Only tension wind loads are permitted. The partial safety factors for material resistance as regulated in the assessment as well as a partial safety factor for load actions of $\gamma_F = 1.5$ are considered.
[2)] The given loads are valid for installation and use of fixations in dry base material for temperatures in the substrate up to +24 °C (resp. short term up to +40 °C).
[3)] Depth of the drilled hole to the deepest point for flush or countersunk installation. Drilling method Hammer drilling. For details on installation data, see ETA.
[4)] Minimum possible axial spacing and edge distances acc. to ETA.
[5)] Rotary drilling.

TermoZ SV II Ecotwist

The innovative countersinkable ETICS fixing for all building material classes



TermoZ SV II Ecotwist setting process with setting tool



Deep countersunk installation of polystyrene insulation boards on concrete

Applications

- Installation of EPS insulation and homogeneous mineral wool boards to concrete and masonry building materials
- Counterbored installation

Advantages

- Standard anchoring depth for all building materials.
- One fixing for all insulating material thicknesses from 100 mm to 400 mm. This increases productivity, saves time and storage space.
- Sturdy setting tool with stop disc for a simple and precise setting procedure.
- The screw disc cuts in cleanly, without damaging the insulating material.
- Simple setting using the specially designed setting tool.

Certificates / Features

ETA-12/0208, in concrete and masonry

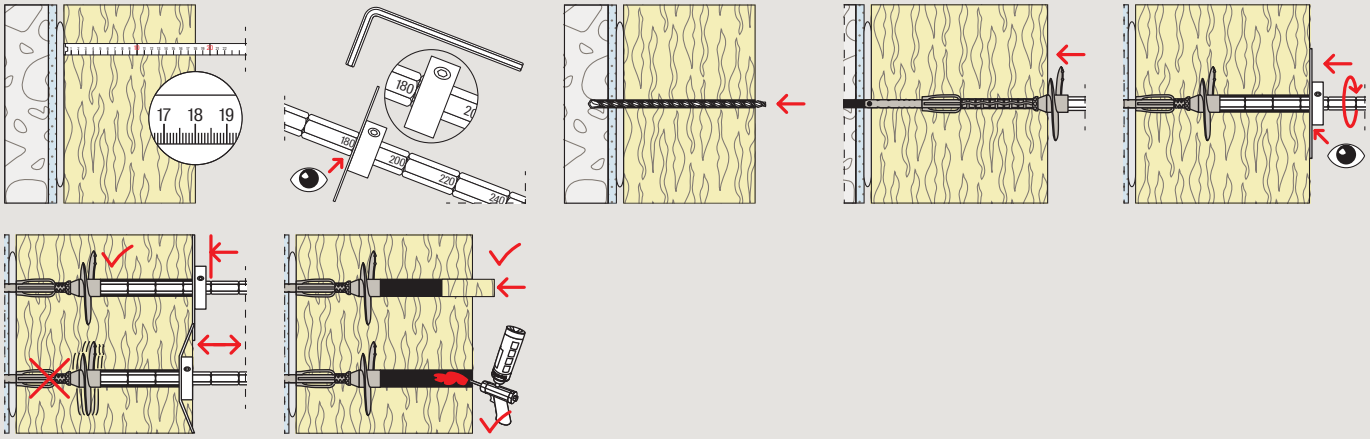
Building materials

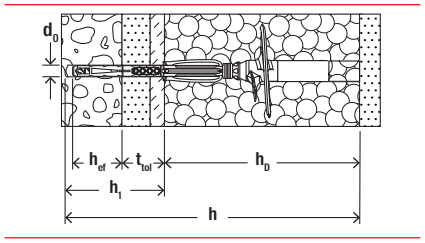
- Building material classes A, B, C, D, E
- Concrete
- Concrete (weather shell)
- Building brick
- Solid sand-lime brick
- Hollow blocks made from lightweight concrete
- Vertically perforated brick
- Perforated sand-lime brick
- Aerated concrete
- Lightweight aggregate concrete
- Sepa Parpaing (French brick)

Functioning

- The fixing is inserted through the insulating material into the drill hole and screwed in using the setting tool.
- The identical thread pitch of the steel screw and the plate guarantees an even drive.
- Then the steel screw turns into the expansion part. The compression part is compressed to the maximum and the fixing is anchored in the base material.
- The setting process is complete when the stop disc is flush with the insulation surface.

Installation TermoZ SV II Ecotwist





Technical data

TermoZ SV II Ecotwist

TermoZ SV II Ecotwist

Item	Item no.	Approval ETA	Insulation thickness h_D [mm]	Disc ø [mm]	Drill diameter d_0 [mm]	Thickness of tolerance compensation non-bearing layers t_{tol} [mm]	Effect. anchorage depth h_{ef} [mm]	Min. drill hole depth in the building material incl. non-bearing layers h_1 [mm]	Min. total drill hole incl. insulation and non-bearing layers h [mm]	Sales unit [pcs]
TermoZ SV II Ecotwist 0-10	**530353**	●	100 - 400	66	8	0 - 10	35	55	hD + 55	100
TermoZ SV II Ecotwist 10-30	**530354**	●	100 - 400	66	8	10 - 30	35	75	hD + 75	100
TermoZ SV II Ecotwist 30-60	**530355**	●	100 - 400	66	8	30 - 60	35	105	hD + 105	100

Accessories

Accessories TermoZ SV II Ecotwist

Closing plug PS

Closing plug MW

Installation tool

Item	Item no.	Diameter d [mm]	Thickness S [mm]	Sales unit [pcs]
TermoZ SV II closing plug PS	**530654**	15	40.0	200
TermoZ SV II closing plug MW	**536160**	15	40.0	200
TermoZ SV II installation tool 260 mm	**530356**	–	–	1
TermoZ SV II installation tool 400 mm	**530357**	–	–	1

Loads

TermoZ SV II Ecotwist

Permissible loads for a single anchor[1)2)] for multiple use for non-structural applications.
For the design the complete current assessment ETA-12/0208 of 18.10.2022 has to be considered.

					Concrete and masonry		
Base material	Brick raw density ρ [kg/dm³]	Minimum compressive brick strength f_b [N/mm²]	Effective anchorage depth[3)] $h_{ef} \geq$ [mm]	Minimum member thickness h_{min} [mm]	Permissible tension load[1)2)] N_{zul} [kN]	Minimum spacing[4)] s_{min} [mm]	Minimum edge distance[4)] c_{min} [mm]
Concrete	-	≥ C12/15	35	100	0.50	100	100
	-	≤ C50/60	35	100	0.50	100	100
Weather resistant concrete shell	-	≥ C20/25	35	40	0.30	100	100
	-	≤ C50/60	35	40	0.30	100	100
Sand-lime solid brick acc. to EN 771-1:2011+A1:2015, KS	≥ 2.0	12	35	100	0.40	100	100
	≥ 2.0	20	35	100	0.50	100	100
Solid clay bricks acc. to EN 771-1:2011+A1:2015, Mz	≥ 1.8	12	35	100	0.40	100	100
Solid concrete block acc. to EN 771-3:2011+A1:2015, Vbn	≥ 2.0	12	35	100	0.40	100	100
	≥ 2.0	20	35	100	0.50	100	100
Vertically perforated sand-lime brick acc. to EN 771-2:2011+A1:2015, KSL	≥ 1.4	12	35[5)]	100	0.25	100	100
	≥ 1.4	20	35[5)]	100	0.40	100	100
Vertically perforated clay bricks acc. to EN 771-1:2011+A1:2015, HLz	≥ 1.0	12	35[5)6)]	100	0.25	100	100
Lightweight concrete solid block acc. to EN 771-3:2011+A1:2015, Vbl	≥ 1.4	8	35[5)]	100	0.20	100	100
Lightweight concrete hollow blocks acc. to EN 771-3:2011+A1:2015, Hbl	≥ 1.2	8	35[5)]	100	0.30	100	100
	≥ 1.2	10	35[5)]	100	0.40	100	100
Lightweight aggregate concrete acc. to EN 1520:2011, LAC	≥ 0.9	6	35	100	0.25	100	100
Autoclaved aerated concrete blocks acc. to EN 771-4:2011+A1:2015, AAC	≥ 0.5	4	35[6)]	100	0.15	100	100

1) Plastic anchor for fixing of external thermal insulation composite systems with rendering acc. to ETA data. Only tension wind loads are permitted. The partial safety factors for material resistance as regulated in the assessment as well as a partial safety factor for load actions of $\gamma_L = 1.5$ are considered.
2) The given loads are valid for installation and use of fixations in dry base material for temperatures in the substrate up to +24 °C (resp. short term up to +40 °C).
3) Drilling method Hammer drilling. For details on installation data, see ETA.
4) Minimum possible axial spacing and edge distances acc. to ETA.
5) Restrictions concerning the manufacturer and the permissible hole patterns, see ETA.
6) Rotary drilling.

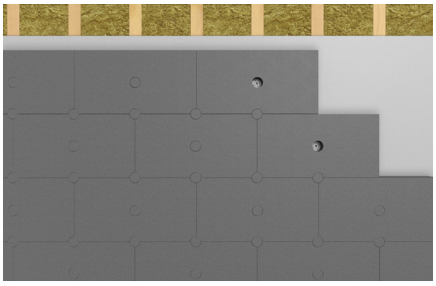

3

3

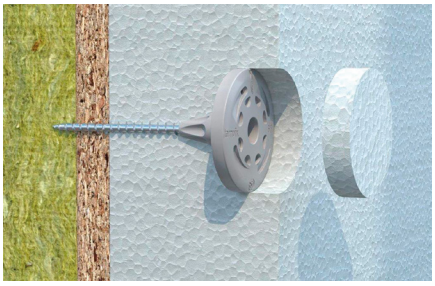
Screw fixings for wood and board materials

TermoZ 6H

The efficient countersunk ETICS fixing for board materials



Fixing of polystyrene boards to a wooden substructure



Countersunk installation of polystyrene boards on OSB panels

Applications

- Attachment of ETICS insulating boards on wooden substructures.
- Flush installation in ETICS insulating materials e.g. polystyrene and mineral wool.
- Flush-to-surface installation in pressure-resistant insulation boards.

Advantages

- The pre-assembled ETICS fixing guarantees safe fixing into the substrate.
- The special geometry under the head of the anchor roughens the surface during the setting process and provides a torque-reduced penetration into the insulation.
- The use of the setting tool 6H enables a clean fixing. Optionally, the setting tool CS can be used in combination with the Bit TX30 / TX25 43,5mm.
- The minimum screw-in depth of 24 mm provides quick installation. Pre-drilling is not necessary.
- For insulating material thicknesses up to 300 mm.

Certificates / Features

Zulassung

THIRD-PARTY VERIFIED EPD Institut Bauen und Umwelt e.V.

Building materials

- MDF boards
- OSB boards
- Chipboard
- Gypsum fibreboard
- Solid wood

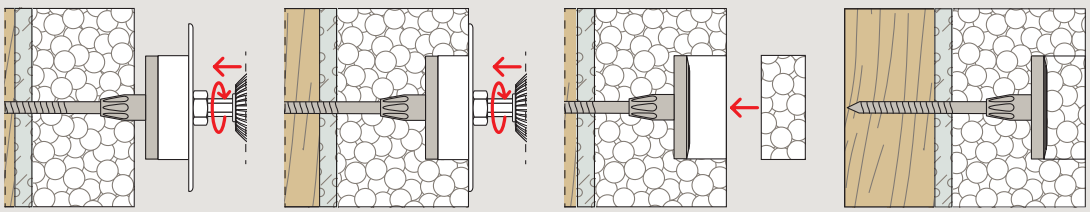
Versions

- Galvanised screw (TX30)
- Stainless steel screw A2 (TX25)
- Flush mounting with TX25 / TX30 bit

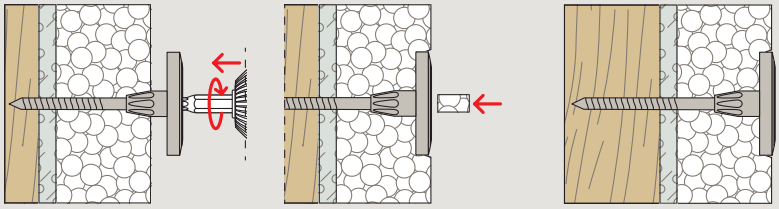
Functioning

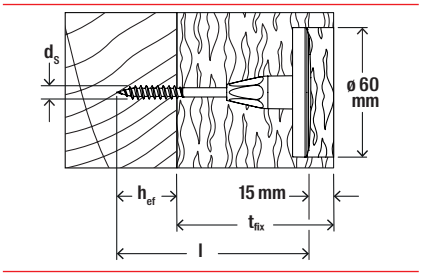
- The special setting tool 6H is used for countersunk installation. This setting tool enables a precise positioning and fast installation of the fixing. The countersunk hole is covered with a suitable insulation round cap which ensures a homogeneous surface.
- By rotating the disc of the setting tool 6H by 180°, it can be used for the flush to surface installation. This allows the exact positioning of the anchor plate on the insulation surface. The screw opening is covered by the closing plug.

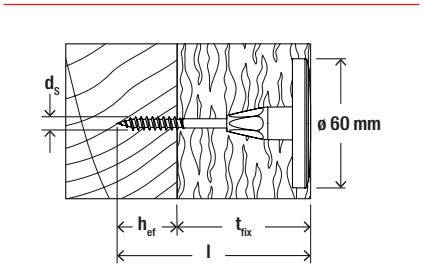
Countersunk installation with setting tool 6H



Flush to surface installation with TX30 bit







Technical data

TermoZ 6H

TermoZ 6H

Item	Item no.	Approval DIBt	Anchor length l [mm]	Disc ø [mm]	Screw diameter d_s [mm]	Anchorage depth h_{ef} [mm]	Max. usable length at surface-flush installation t_{fix} [mm]	Max. usable length at countersunk installation t_{fix} [mm]	Sales unit [pcs]
TermoZ 6H 60	**548477**[1]	●	60	60	6	24	30	–	100
TermoZ 6H 80	**548478**[1]	●	80	60	6	24	50	65	100
TermoZ 6H 100	**548479**[1]	●	100	60	6	24	70	85	100
TermoZ 6H 120	**548480**[1]	●	120	60	6	24	90	105	100
TermoZ 6H 140	**548481**[1]	●	140	60	6	24	110	125	100
TermoZ 6H 160	**548482**[1]	●	160	60	6	24	130	145	100
TermoZ 6H 180	**548483**[1]	●	180	60	6	24	150	165	100
TermoZ 6H 200	**548484**[1]	●	200	60	6	24	170	185	100
TermoZ 6H 220	**548485**[1]	●	220	60	6	24	190	205	100
TermoZ 6H 240	**548486**[1]	●	240	60	6	24	210	225	100
TermoZ 6H 260	**548487**[1]	●	260	60	6	24	230	245	100
TermoZ 6H 280	**548488**[1]	●	280	60	6	24	250	265	100
TermoZ 6H 320	**548490**[1]	●	320	60	6	24	290	305	100
TermoZ 6H 120 A2	**557162**[2]	●	120	60	6	24	90	105	100
TermoZ 6H 140 A2	**557163**[2]	●	140	60	6	24	110	125	100
TermoZ 6H 160 A2	**557164**[2]	●	160	60	6	24	130	145	100
TermoZ 6H 180 A2	**557165**[2]	●	180	60	6	24	150	165	100
TermoZ 6H 200 A2	**557166**[2]	●	200	60	6	24	170	185	100
TermoZ 6H 220 A2	**557167**[2]	●	220	60	6	24	190	205	100

[1] Bit size = TX30
[2] Bit size = TX25

Accessories

Accessories for TermoZ 6H


Round cap MW D63,5


Round cap PS D60 white


Round cap PS D60 grey


Round cap HW 65


Setting tool 6H (hexagonal-adapter)


Bit TX30 / TX25

Item	Item no.	Match	Drive	Contents	Sales unit [pcs]
Round cap MW 63,5	**525654**	–	–		100
Round cap PS 60 white	**046173**	–	–		100
Round cap PS 60 grey	**544383**	–	–		100
Caps HW 65	**562592**	–	–		100
Setting tool 6H (hexagonal-adapter)	**551734**	–	–	Including Bit TX30	1
Bit TX30 H 43,5 mm	**551735**	Setting tool CS	TX30		1
Bit TX25 H 43,5 mm A2	**557132**	Setting tool CS	TX25		1

Loads

TermoZ 6H

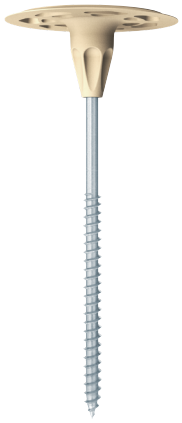
Permissible tension loads for a single anchor[1] for multiple use for fixing external thermal insulation composite systems to external walls made of timber.
For the designt the complete current national approval and general construction technique permit Z-9.1-887 has to be considered.

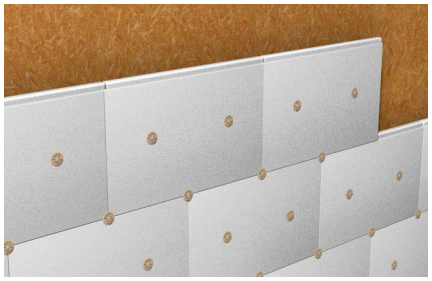
Base material	Minimum strength class	Minimum raw density ρ [kg/dm^3]	Maximum screw-in depth[2] $l_{ef,max}$ [mm]	Minimum screw-in depth[2] $l_{ef,min}$ [mm]	Permissible load of the pull-out resistance $F_{ax,90,perm}$ [N]
Solid timber boards made of softwood acc. DIN EN 14081-1, DIN 20000-5	C24	-	-	24	840
Glued laminated timber acc. DIN EN 14080, DIN 20000-3	-	-	100	30	33 N/mm x l_{ef}
Glued laminated timber with solid wood lamellae acc. DIN EN 14080, DIN 20000-3	C24	-	100	30	33 N/mm x l_{ef}
Cross-laminated timber made of soft wood	C24	-	100	30	33 N/mm x l_{ef}
Oriented strand boards of type OSB/3 and OSB/4 acc. DIN EN 13986, DIN 20000-1	-	550	60[3] / 30[4]	12[5]	373
	-	550	60[3] / 30[4]	15[5]	373
	-	550	60[3] / 30[4]	18[5]	467
Resin-bonded particleboards of at least type P5 acc. DIN EN 13986, DIN 20000-1	-	600	52[3] / 30[4]	13[5]	307
	-	600	52[3] / 30[4]	16[5]	420
	-	600	52[3] / 30[4]	19[5]	513

[1] The partial safety factors for material resistance regulated in the approval and a partial safety factor for load actions γ_L = 1.5 are taken into account.
[2] Embedment depth of the threaded part of the screws in timber product.
[3] For screws made of galvansed steel.
[4] For screws made of stainless steel.
[5] Drilling tip must extend by at least 10 mm.

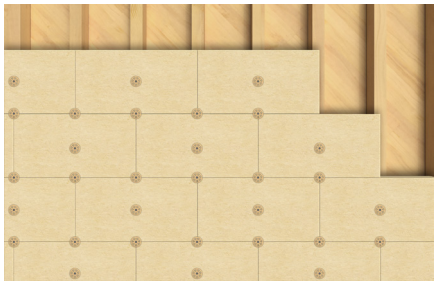
TermoFix 6H-NT

The ETICS screw fixing for board materials with approved screw





Fixing of polystyrene boards to OSB panels



Fixing of soft wood fibre boards on solid wood

Applications

- Attachment of ETICS insulating boards on wooden substructures
- Flush installation in ETICS insulating materials e.g. polystyrene
- Flush-to-surface installation in soft wood fibre boards

Advantages

- Pre-assembled fixing with the approved fischer screw. This guarantees safe retention in the substrate.
- The minimum screw-in depth of 30 mm guarantees fast installation.
- Closing plugs are enclosed in every packaging unit.
- The fixing can be combined with the large insulating discs DT 90, DT 110 and DT 140 when very soft insulating materials are used.
- Countersunk installation by using the TSS setting tool is possible in soft materials such as polystyrene boards.
- For insulating material thicknesses up to 280 mm.

Certificates / Features

THIRD-PARTY VERIFIED EPD Institut Bauen und Umwelt e.V.

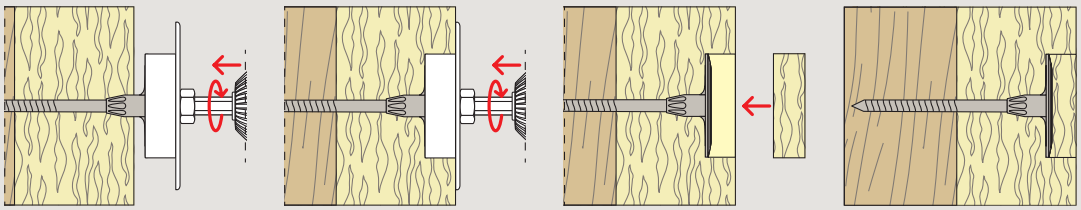
Building materials

- MDF boards
- OSB boards
- Chipboard
- Gypsum fibreboard
- Solid wood

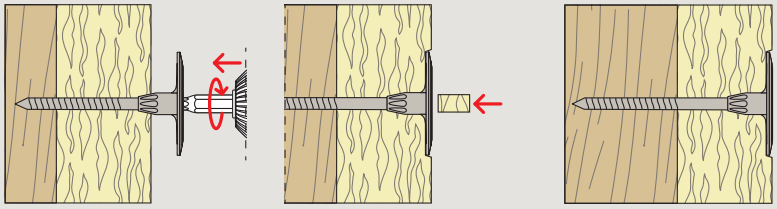
Functioning

- The fixing is screwed in by unsing a standard TX30 bit for flush installation.
- The TSS setting tool is required for countersunk installation. This is used for precise positioning and screwing in the fixing. The countersunk hole is covered with a suitable insulation round cap which ensures a homogeneous surface.
- The disc of the TSS setting tool can also be turned and used for flush-to-surface installation. This prevents the plate from being set too deep.

Countersunk installation with TSS setting tool



Flush to surface installation with TX30 bit



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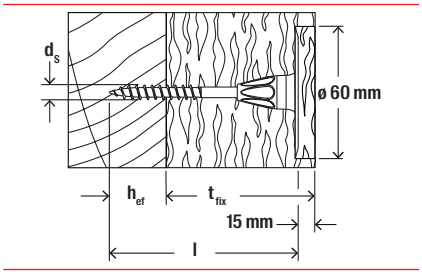
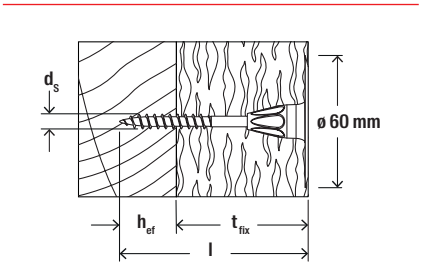




Technical data

TermoFix 6H-NT

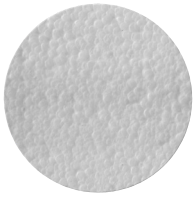
TermoFix 6H-NT

Item	Item no.	Anchor length l [mm]	Disc ø [mm]	Screw diameter d_s [mm]	Anchorage depth h_{ef} [mm]	Usable length at surface-flush installation t_{fix} [mm]	Effective length with recessed mounting t_{fix} [mm]	Sales unit [pcs]
TermoFix 6H-NT 60	**523198**	60	60	6	30	30	–	100
TermoFix 6H-NT 80	**523199**	80	60	6	30	50	65	100
TermoFix 6H-NT 100	**523200**	100	60	6	30	70	85	100
TermoFix 6H-NT 120	**523201**	120	60	6	30	90	105	100
TermoFix 6H-NT 140	**523202**	140	60	6	30	110	125	100
TermoFix 6H-NT 160	**523203**	160	60	6	30	130	145	100
TermoFix 6H-NT 180	**523204**	180	60	6	30	150	165	100
TermoFix 6H-NT 200	**523205**	200	60	6	30	170	185	100
TermoFix 6H-NT 220	**523206**	220	60	6	30	190	205	100
TermoFix 6H-NT 240	**523207**	240	60	6	30	210	225	100
TermoFix 6H-NT 260	**523208**	260	60	6	30	230	245	100
TermoFix 6H-NT 280	**523209**	280	60	6	30	250	265	100
TermoFix 6H-NT 300	**523210**	300	60	6	30	270	285	100
TermoFix 6H-NT 320	**523211**	320	60	6	30	290	305	100

Accessories

Accessories for TermoFix 6H-NT


Round cap MW D63,5


Round cap PS D60 white


Round cap PS D60 grey


Round cap HW 65


Setting tool TSS

Item	Item no.	Contents	Sales unit [pcs]
Round cap MW 63,5	**525654**		100
Round cap PS 60 white	**046173**		100
Round cap PS 60 grey	**544383**		100
Caps HW 65	**562592**		100
Setting tool TSS	**524128**	Including Bit TX30	1

Loads

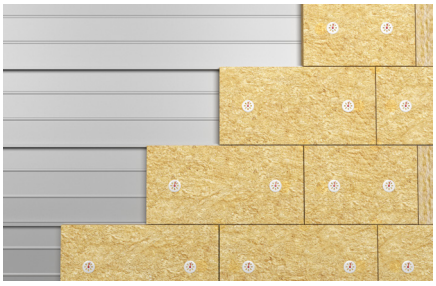
TermoFix 6H-NT

Pull-out values from internal load tests

Base material	Member thickness h [mm]	Recommended service load including safety factor 3 Anchorage depth h_v = 30 mm [kN]
OSB panel	16	0.40
Chipboard FP (laminated particle board)	16	0.30
3 layer panel	19	0.50
Wooden beams	60	0.60 (1.0 kN at h_v = 40)
Gypsum fibreboard	12.5	0.15
MDF board	19	0,50

TermoFix B

The ETICS screw fixing with Delta Seal-coated drill screw for sheet metal subsurfaces



Mineral wool insulation boards on metal sheet

Applications

- Attachment of ETICS insulating boards to metal substructures
- Flush-to-surface installation in ETICS insulating materials e.g. polystyrene

Advantages

- The prefitted screw shortens the processing time.
- Higher corrosion protection for the screw thanks to the Delta-Seal coating. This means security for years to come.
- An air column is created above the head by the locking ball. This reduces heat transmission.
- The flexible head offsets the thermally induced tensions and prevents damage.
- For very soft insulation materials the TermoFix B can be combined with the insulation discs DT 90, DT 110, DT 140.

Certificates / Features

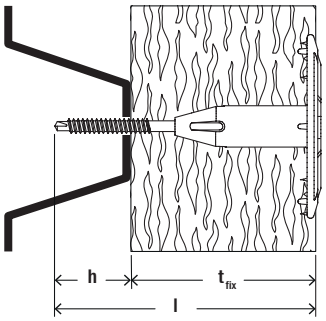
THIRD-PARTY VERIFIED EPD Institut Bauen und Umwelt e.V.

Building materials

- Metal sheet / trapezoidal metal sheet up to 1.5 mm

Functioning

- The fixing fixing is set in push-through installation.
- A standard PH2 bit is required for installation.
- Simple, quick setting by screwing in the Delta Seal-coated screw with a standard screwdriver.
- Non-load bearing layers, such as adhesive are included in the maximum useful length.

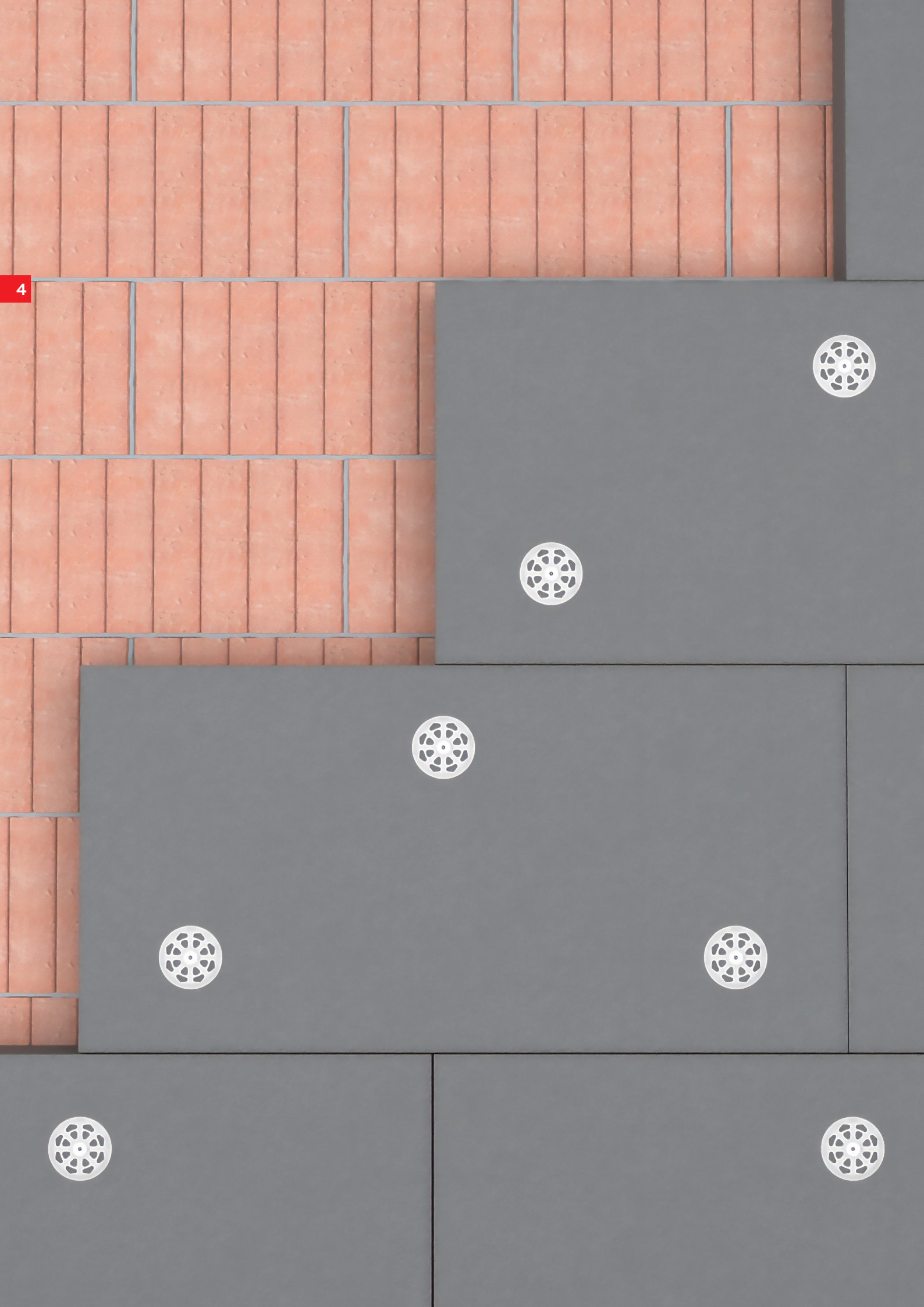


Technical data

TermoFix B

TermoFix B TermoFix B disc

Item	Item no.	Anchor length l [mm]	Anchorage depth h_{ef} [mm]	Max. fixture thickness t_{fix} [mm]	Disc ø [mm]	Sales unit [pcs]
TermoFix B 70	**008691**	70	20	50	60	100
TermoFix B 90	**008692**	90	20	70	60	100
TermoFix B 110	**008693**	110	20	90	60	100
TermoFix B 130	**008694**	130	20	110	60	100
TermoFix B 160	**008695**	160	20	140	60	100
TermoFix B 180	**008696**	180	20	160	60	100
TermoFix B washer	**534982**	–	–	–	60	100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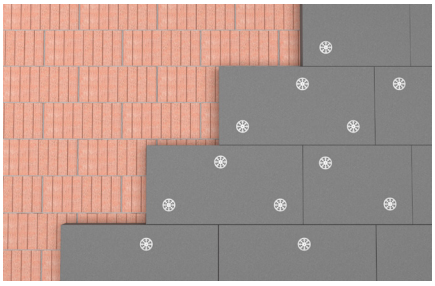
4

Hammerset fixings for solid and hollow building materials

TermoZ CNplus

The premium ETICS hammerset fixing with the option to be screwed in

Flush hammerset installation



Fixing of polysterene boards on vertically perforated bricks.

Applications

- Installation of ETICS insulating boards on concrete and masonry
- Flush installation in ETICS insulating boards, e.g. polystyrene and mineral wool
- Countersunk installation in ETICS insulating boards, e.g. polystyrene and mineral wool, incl. a closing cap for covering

Advantages

- TermoZ CNplus is a hammerset anchor with the option to be screwed in. The plug is suitable for all building materials and insulation types. Due to the flexible use of the fixing the warehouses and ordering processes are reduced.
- If the anchor is set too deep with the hammer it can be simply adjusted with the screwdriver. This saves working time and helps to avoid fixing marks.
- With the screw installation the TermoZ CNplus can be set countersunk or flush.
- Moreover the screw installation enables an accurate setting due to an optimum application on the insulation surface. Also on soft insulation boards.
- The compound nail ensures a high energy efficiency with the countersunk installation, because there is nearly no heat transmission.
- The TermoZ CNplus is particularly sustainable as it can be dismantled at the end of its service life.
- Can be combined with DT 90, 110, 140.

Certificates / Features

ETA-09/0394, in concrete and masonry

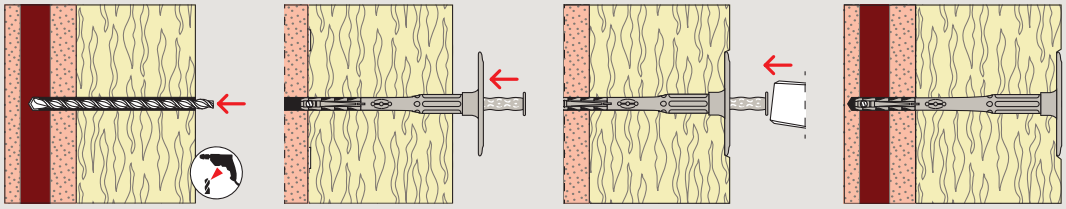
Building materials

- Building material classes A, B, C, D, E
- Concrete
- Full blocks made from 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

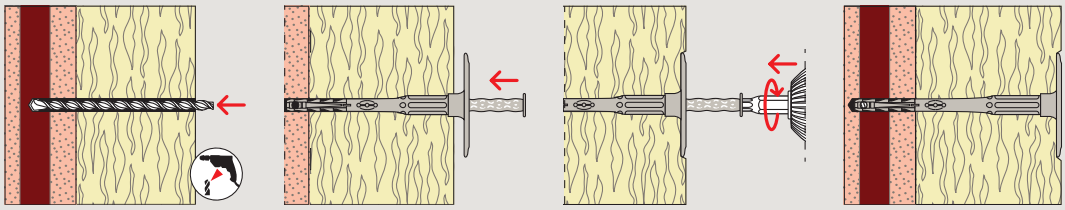
Functioning

- The plug is set in push-through installation.
- Simple, fast setting by hammering in the compound nail.
- The setting process with the screwdriver is performed flush with a standard Bit TX25.
- For countersunk installation the setting tool CNplus is required. The plate is covered with a round cap.
- The TermoZ CNplus is particularly sustainable as it can be dismantled at the end of the service life of the ETICS.
- Non-load bearing layers, such as adhesive and old plaster, are included in the maximum useful length.

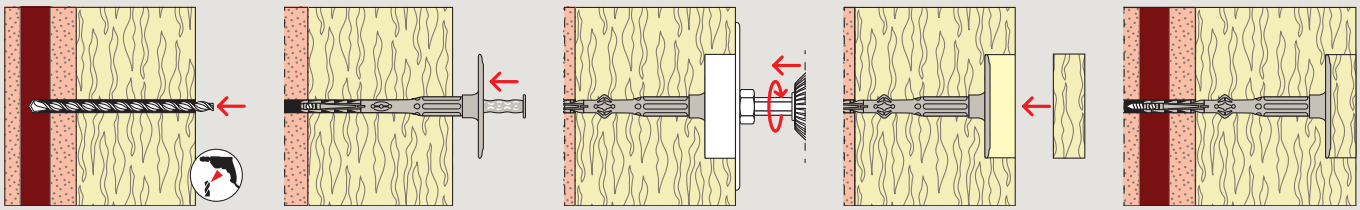
Standard: Flush to surface hammerset installation



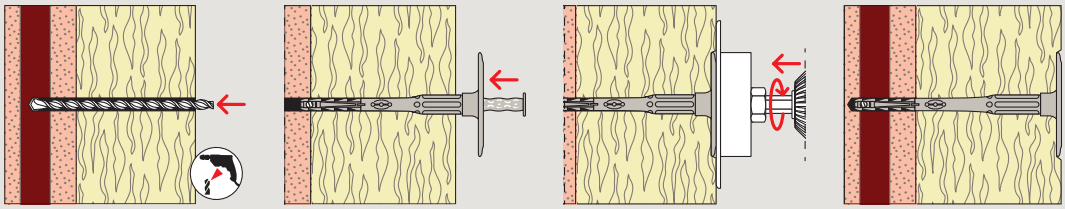
Standard: Flush to surface screw installation with TX25 bit

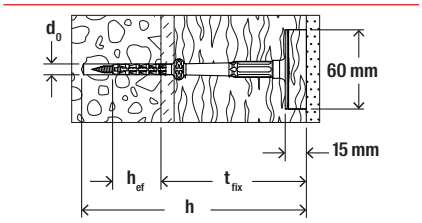


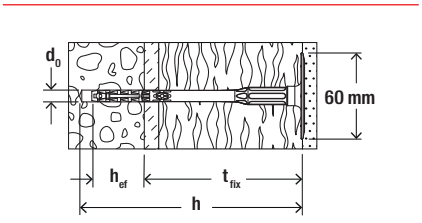
Standard: Countersunk screw installation with setting tool CNplus



Alternative: Flush to surface screw installation with setting tool CNplus







Technical data

TermoZ CNplus for building material classes A, B, C

TermoZ CNplus

Item	Item no.	Approval ETA	Drill diameter d_0 [mm]	Effect. anchorage depth h_{ef} [mm]	Max. usable length at surface-flush installation t_{fix} [mm]	Min. total drill whole depth incl. insulation at surface flush installation h [mm]	Max. usable length at countersunk installation t_{fix} [mm]	Min. total drill whole depth incl. insulation at countersunk installation h [mm]	Drive	Sales unit [pcs]
TermoZ CNplus 8/110	540376	●	8	35	70	115	–	–	TX25	100
TermoZ CNplus 8/130	540377	●	8	35	90	135	90	150	TX25	100
TermoZ CNplus 8/150	540378	●	8	35	110	155	110	170	TX25	100
TermoZ CNplus 8/170	540379	●	8	35	130	175	130	190	TX25	100
TermoZ CNplus 8/190	540380	●	8	35	150	195	150	210	TX25	100
TermoZ CNplus 8/210	540381	●	8	35	170	215	170	230	TX25	100
TermoZ CNplus 8/230	540382	●	8	35	190	235	190	250	TX25	100
TermoZ CNplus 8/250	540383	●	8	35	210	255	210	270	TX25	100
TermoZ CNplus 8/270	540384	●	8	35	230	275	230	290	TX25	100
TermoZ CNplus 8/290	540385	●	8	35	250	295	250	310	TX25	100
TermoZ CNplus 8/310	540386	●	8	35	270	315	270	330	TX25	100
TermoZ CNplus 8/330	540387	●	8	35	290	335	290	350	TX25	100
TermoZ CNplus 8/350	540388	●	8	35	310	355	310	370	TX25	100
TermoZ CNplus 8/370	540389	●	8	35	330	375	330	390	TX25	100
TermoZ CNplus 8/390	540390	●	8	35	350	395	350	410	TX25	100

Technical data

TermoZ CNplus for building material classes D, E

TermoZ CNplus

Item	Item no.	Approval ETA	Drill diameter d_0 [mm]	Effect. anchorage depth h_{ef} [mm]	Max. usable length at surface-flush installation t_{fix} [mm]	Min. total drill whole depth incl. insulation at surface flush installation h [mm]	Max. usable length at countersunk installation t_{fix} [mm]	Min. total drill whole depth incl. insulation at countersunk installation h [mm]	Drive	Sales unit [pcs]
TermoZ CNplus 8/130	540377	●	8	55	70	135	70	150	TX25	100
TermoZ CNplus 8/150	540378	●	8	55	90	155	90	170	TX25	100
TermoZ CNplus 8/170	540379	●	8	55	110	175	110	190	TX25	100
TermoZ CNplus 8/190	540380	●	8	55	130	195	130	210	TX25	100
TermoZ CNplus 8/210	540381	●	8	55	150	215	150	230	TX25	100
TermoZ CNplus 8/230	540382	●	8	55	170	255	170	250	TX25	100
TermoZ CNplus 8/250	540383	●	8	55	190	275	190	270	TX25	100
TermoZ CNplus 8/270	540384	●	8	55	210	295	210	290	TX25	100
TermoZ CNplus 8/290	540385	●	8	55	230	315	230	310	TX25	100
TermoZ CNplus 8/310	540386	●	8	55	250	335	250	330	TX25	100
TermoZ CNplus 8/330	540387	●	8	55	270	355	270	350	TX25	100
TermoZ CNplus 8/350	540388	●	8	55	290	375	290	370	TX25	100
TermoZ CNplus 8/370	540389	●	8	55	310	395	310	390	TX25	100

Technical data

TermoZ CNplus for building material classes D, E

TermoZ CNplus

	Item no.	Approval	Drill diameter d_0 [mm]	Effect. anchorage depth h_{ef} [mm]	Max. usable length at surface-flush installation t_{fix} [mm]	Min. total drill whole depth incl. insulation at surface flush installation h [mm]	Max. usable length at countersunk installation t_{fix} [mm]	Min. total drill whole depth incl. insulation at countersunk installation h [mm]	Drive	Sales unit [pcs]
Item										
TermoZ CNplus 8/390	**540390**	●	8	55	330	415	330	410	TX25	100

Accessories

Accessories for TermoZ CNplus

Round cap MW D63,5

Round cap PS D60 white

Round cap PS D60 grey

Setting tool CNplus (SDS-adapter)

Setting tool CNplus (hexagonal-adapter)

Bit TX25 CNplus 26 mm

	Item no.	Match	Contents	Sales unit [pcs]
Item				
Round cap MW 63,5	**525654**	–		100
Round cap PS 60 white	**046173**	–		100
Round cap PS 60 grey	**544383**	–		100
Setting tool CNplus (SDS-adapter)	**544123**	–	Including Bit TX25	1
Setting tool CNplus (hexagonal-adapter)	**544259**	–	Including Bit TX25	1
Bit TX25 CNplus 26 mm	**540251**	Setting tool CNplus		1

Loads

Termoz CNplus 8

Permissible tensile loads[1)2)] for fixing external thermal insulation composite systems with rendering.
For the design the complete current assessment ETA-09/0394 of 18.10.2022 has to be considered.

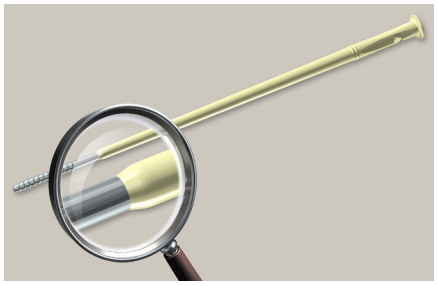
					Concrete and masonry		
Base material	Brick raw density ρ [kg/dm³]	Minimum compressive brick strength f_b [N/mm²]	Effective anchorage depth[3)] h_{ef} [mm]	Minimum member thickness h_{min} [mm]	Permissible tension load[1)2)] N_{perm} [kN]	Minimum spacing[4)] s_{min} [mm]	Minimum edge distance[4)] c_{min} [mm]
Concrete	-	≥ C12/15	≥ 35	100	0.30	100	100
	-	≤ C50/60	≥ 35	100	0.30	100	100
Weather resistant concrete shell	-	≥ C20/25	≥ 35	42	0.30	100	100
	-	≤ C50/60	≥ 35	42	0.30	100	100
Sand-lime solid brick acc. to EN 771-1:2011+A1:2015, KS	≥ 1.8	20	≥ 35	100	0.30	100	100
Solid clay bricks acc. to EN 771-1:2011+A1:2015, Mz	≥ 1.8	20	≥ 35	100	0.30	100	100
Solid concrete block acc. to EN 771-3:2011+A1:2015, Vbn	≥ 2.0	20	≥ 35	100	0.30	100	100
Vertically perforated sand-lime brick acc. to EN 771-2:2011+A1:2015, KSL	≥ 1.4	16	≥ 35[5)]	100	0.17	100	100
Vertically perforated clay bricks acc. to EN 771-1:2011+A1:2015, HLz	≥ 1.0	48	≥ 35[5) 6)]	100	0.25	100	100
	≥ 1.6	12	≥ 35[5) 6)]	100	0.17	100	100
Lightweight concrete solid block acc. to EN 771-3:2011+A1:2015, Vbl	≥ 1.6	10	≥ 35[5)]	100	0.25	100	100
Lightweight concrete hollow blocks acc. to EN 771-3:2011+A1:2015, Hbl	≥ 1.2	10	≥ 35	100	0.20	100	100
Lightweight aggregate concrete acc. to EN 1520:2011, LAC	≥ 0.9	6	≥ 55	100	0.13	100	100
Autoclaved aerated concrete blocks acc. to EN 771-4:2011+A1:2015, AAC	≥ 0.4	4	≥ 55[6)]	100	0.10	100	100

[1)] Plastic anchor for fixing of external thermal insulation composite systems with rendering acc. to ETA data. Only tension wind loads are permitted. 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)] The given loads are valid for installation and use of fixations in dry base material for temperatures in the substrate up to +24 °C (resp. short term up to +40 °C).
[3)] Drilling method Hammer drilling. For details on installation data, see ETA.
[4)] Minimum possible axial spacing and edge distances acc. to ETA.
[5)] Restrictions concerning the manufacturer and the permissible hole patterns, see ETA.
[6)] Rotary drilling.

TermoZ CN 8

The high-performance ETICS hammerset fixing with compound nail

ETICS on old render



Detail: innovative steel-plastic combination

Applications

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

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.
- High retention forces thanks to the steel tip of the compound nail.
- Small anchoring depth of 35 mm saves on drilling times.
- The TermoZ CN is free of thermal bridging due to the compound nail.
- The compression zone in the shank allows the disc to be drawn in precisely.
- 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 340 mm.

Certificates / Features

ETA-09/0394, in concrete and masonry

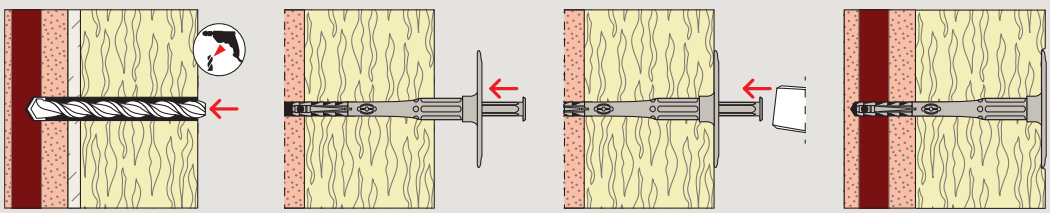
Building materials

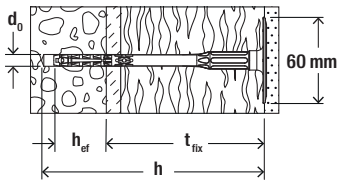
- Building material classes A, B, C, D, E
- Concrete
- Full blocks made from concrete
- Building brick
- Solid sand-lime brick
- Hollow blocks made from lightweight concrete
- Vertically perforated brick
- Perforated sand-lime brick
- Lightweight aggregate concrete
- Aerated concrete

Functioning

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

Installation TermoZ CN 8





Technical data

TermoZ CN 8

Termoz CN 8

Item	Item no.	Approval ETA	Drill diameter d_0 [mm]	Effect. anchorage depth h_{ef} [mm]	Max. usable length t_{fix} [mm]	Min. total drill whole depth incl. insulation h [mm]	Sales unit [pcs]
TermoZ CN 8/110	**507418**	●	8	35	70	115	100
TermoZ CN 8/130	**507419**	●	8	35	90	135	100
TermoZ CN 8/150	**507420**	●	8	35	110	155	100
TermoZ CN 8/170	**507421**	●	8	35	130	175	100
TermoZ CN 8/190	**507422**	●	8	35	150	195	100
TermoZ CN 8/210	**507423**	●	8	35	170	215	100
TermoZ CN 8/230	**507424**	●	8	35	190	235	100
TermoZ CN 8/250	**507425**	●	8	35	210	255	100
TermoZ CN 8/270	**507426**	●	8	35	230	275	100
TermoZ CN 8/290	**507427**	●	8	35	250	295	100
TermoZ CN 8/310	**507428**	●	8	35	270	315	100
TermoZ CN 8/330	**507429**	●	8	35	290	335	100
TermoZ CN 8/350	**507430**	●	8	35	310	355	100
TermoZ CN 8/370	**507431**	●	8	35	330	375	100
TermoZ CN 8/390	**507432**	●	8	35	350	395	100
TermoZ CN 8/250 R	**520546**	●	8	35	210	255	100
TermoZ CN 8/270 R	**520547**	●	8	35	230	275	100
TermoZ CN 8/290 R	**520548**	●	8	35	250	295	100
TermoZ CN 8/310 R	**520549**	●	8	35	270	315	100

Loads

Termoz CN 8

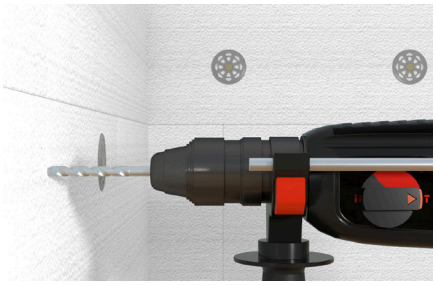
Permissible tensile loads[1)2)] for fixing external thermal insulation composite systems with rendering.
For the design the complete current assessment ETA-09/0394 of 18.10.2022 has to be considered.

					Concrete and masonry		
Base material	Brick raw density ρ [kg/dm³]	Minimum compressive brick strength f_b [N/mm²]	Effective anchorage depth[3)] h_{ef} [mm]	Minimum member thickness h_{min} [mm]	Permissible tension load[1)2)] N_{perm} [kN]	Minimum spacing[4)] s_{min} [mm]	Minimum edge distance[4)] c_{min} [mm]
Concrete	-	≥ C12/15	≥ 35	100	0.30	100	100
	-	≤ C50/60	≥ 35	100	0.30	100	100
Sand-lime solid brick acc. to EN 771-1:2011+A1:2015, KS	≥ 1.8	12	≥ 35[5)]	100	0.30	100	100
Solid clay bricks acc. to EN 771-1:2011+A1:2015, Mz	≥ 2.0	12	≥ 35[5)]	100	0.30	100	100
Solid concrete block acc. to EN 771-3:2011+A1:2015, Vbn	≥ 2.0	20	≥ 35[5)]	100	0.25	100	100
Vertically perforated sand-lime brick acc. to EN 771-2:2011+A1:2015, KSL	≥ 1.4	12	≥ 35[5)]	100	0.17	100	100
	≥ 1.4	20	≥ 35[5)]	100	0.25	100	100
Vertically perforated clay bricks acc. to EN 771-1:2011+A1:2015, HLz	≥ 1.0	12	≥ 35[5)6)]	100	0.20	100	100
Lightweight concrete solid block acc. to EN 771-3:2011+A1:2015, Vbl	≥ 1.4	8	≥ 35[5)]	100	0.20	100	100
Lightweight concrete hollow blocks acc. to EN 771-3:2011+A1:2015, Hbl	≥ 1.2	10	≥ 35[5)]	100	0.20	100	100
Lightweight aggregate concrete acc. to EN 1520:2011, LAC	≥ 0.8	4	≥ 35[5)]	100	0.13	100	100
	≥ 0.8	6	≥ 35[5)]	100	0.20	100	100
Autoclaved aerated concrete blocks acc. to EN 771-4:2011+A1:2015, AAC	≥ 0.4	4	≥ 55[6)]	100	0.10	100	100
	≥ 0.6	6	≥ 55[6)]	100	0.10	100	100

[1)] Plastic anchor for fixing of external thermal insulation composite systems with rendering acc. to ETA data. Only tension wind loads are permitted. 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)] The given loads are valid for installation and use of fixations in dry base material for temperatures in the substrate up to +24 °C (resp. short term up to +40 °C).
[3)] Drilling method Hammer drilling. For details on installation data, see ETA.
[4)] Minimum possible axial spacing and edge distances acc. to ETA.
[5)] Restrictions concerning the manufacturer and the permissible hole patterns, see ETA.
[6)] Rotary drilling.

TermoZ PN 8

The thermal bridge-free ETICS hammerset fixing with GRP-nail



Application in EPS boards

Setting the hammerset fixing on EPS boards

Applications

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

Advantages

- Due to the special geometry of the fixing, small drill hole depths are possible.
- The crumble zone allows an exact washer penetration.
- The asymmetric expansion element ensures a perfect anchoring even in hollow and problem substrates.
- The innovative shank and the special geometry of the nylon nail minimize the failure tendency significant particularly in full substrates.
- The washer thickness of only 2.5 mm allows thin and economic reinforcement layers.
- Due to the nylon nail the TermoZ PN provides no thermal bridging.
- Can be combined with insulation retaining washers DT 90, 110 and 140 mm.

Certificates / Features

ETA-09/0171, in concrete and masonry

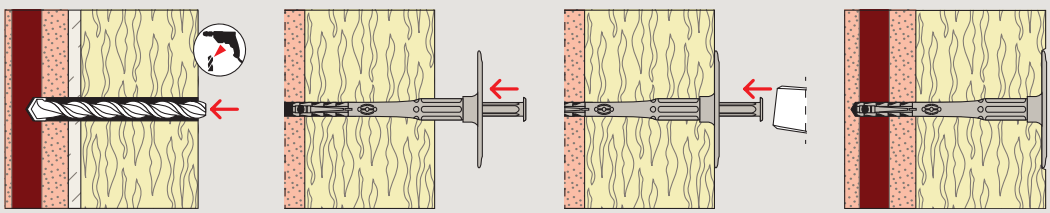
Building materials

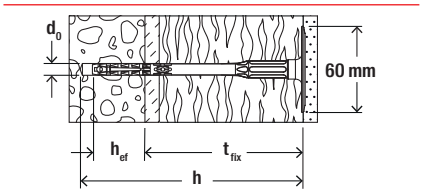
- Building material classes A, B, C, D, E
- Concrete
- Building brick
- Solid sand-lime brick
- Hollow blocks made from lightweight concrete
- Vertically perforated brick
- Perforated sand-lime brick
- Lightweight aggregate concrete
- Aerated concrete

Functioning

- Hammerset fixing for the mounting of ETIC-Systems with insulation boards in concrete and masonry.
- By hammering in the pre-assembled GRP nail with a hammer the fastener will be fixed in the substrate.
- Non load bearing layers such as adhesives and old render are to be included in the required useful length.

Installation TermoZ PN 8





Technical data

TermoZ PN 8

Termoz PN 8

Item	Item no.	Approval ETA	Drill diameter d_0 [mm]	Effect. anchorage depth h_{ef} [mm]	Max. usable length t_{fix} [mm]	Min. total drill whole depth incl. insulation h [mm]	Sales unit [pcs]
TermoZ PN 8/110	**506325**	●	8	35	70	115	100
TermoZ PN 8/130	**506326**	●	8	35	90	135	100
TermoZ PN 8/150	**506327**	●	8	35	110	155	100
TermoZ PN 8/170	**506328**	●	8	35	130	175	100
TermoZ PN 8/190	**506329**	●	8	35	150	195	100
TermoZ PN 8/210	**506330**	●	8	35	170	215	100
TermoZ PN 8/230	**506331**	●	8	35	190	235	100

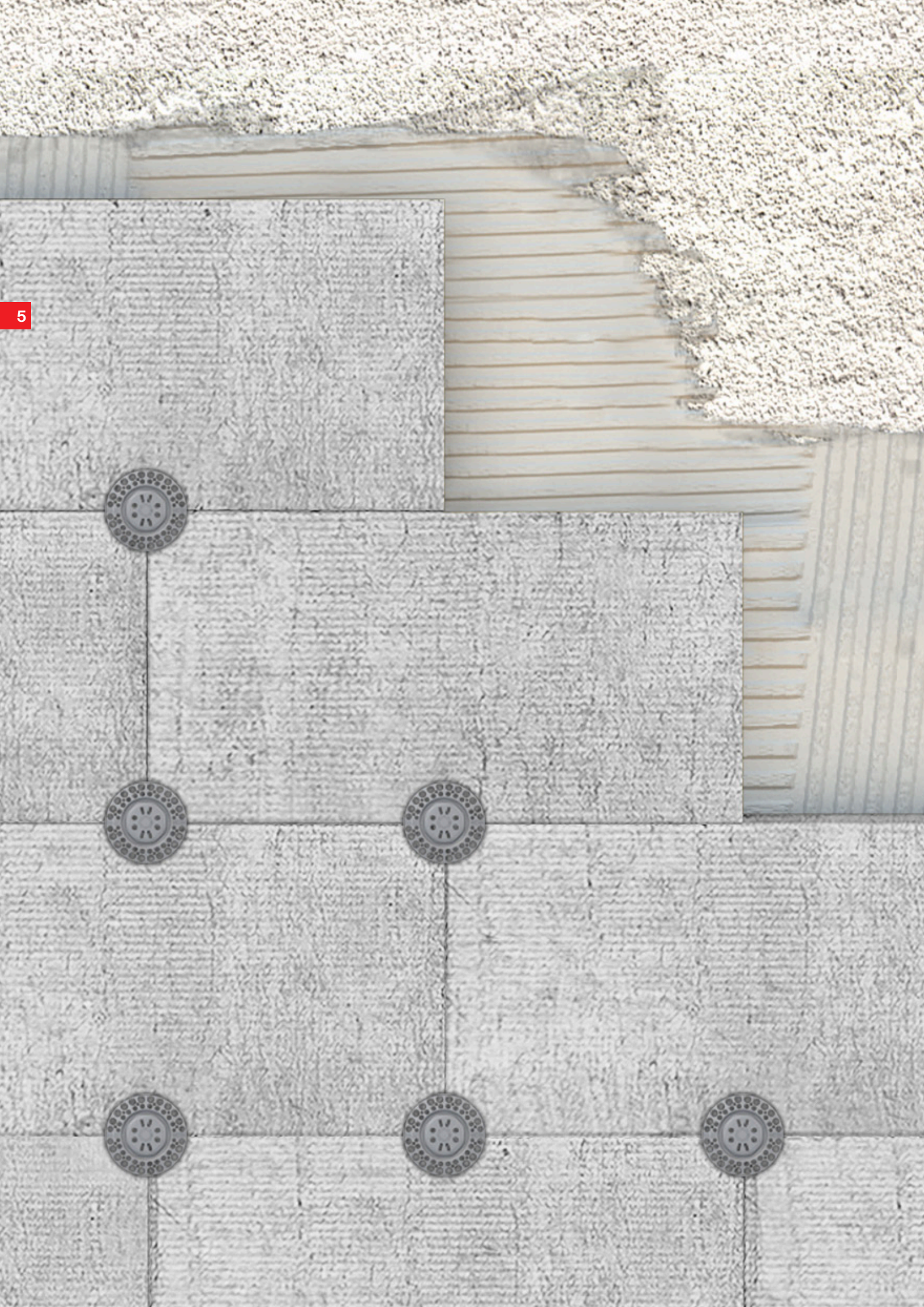
Loads

TermoZ PN 8

Permissible tensile loads[1)2)] for fixing external thermal insulation composite systems with rendering.
For the design the complete current assessment ETA-09/0171 of 18.10.2022 has to be considered.

					Concrete and masonry		
Base material	Brick raw density ρ [kg/dm³]	Minimum compressive brick strength f_b [N/mm²]	Effective anchorage depth[3)] h_{ef} [mm]	Minimum member thickness h_{min} [mm]	Permissible tension load[1)2)] N_{perm} [kN]	Minimum spacing[4)] s_{min} [mm]	Minimum edge distance[4)] c_{min} [mm]
Concrete	-	≥ C12/15	≥ 35	100	0.16	100	100
	-	≤ C50/60	≥ 35	100	0.16	100	100
Sand-lime solid brick acc. to EN 771-1:2011+A1:2015, KS	≥ 1.8	12	≥ 35[5)]	100	0.20	100	100
Solid clay bricks acc. to EN 771-1:2011+A1:2015, Mz	≥ 2.0	12	≥ 35[5)]	100	0.20	100	100
Vertically perforated sand-lime brick acc. to EN 771-2:2011+A1:2015, KSL	≥ 1.4	12	≥ 35[5)]	100	0.13	100	100
Vertically perforated clay bricks acc. to EN 771-1:2011+A1:2015, HLz	≥ 1.0	12	≥ 35[5)6)]	100	0.13	100	100
Lightweight concrete hollow blocks acc. to EN 771-3:2011+A1:2015, Hbl	≥ 1.2	10	≥ 35[5)]	100	0.16	100	100
Lightweight aggregate concrete acc. to EN 1520:2011, LAC	≥ 0.9	6	≥ 55[5)]	100	0.13	100	100
Autoclaved aerated concrete blocks acc. to EN 771-4:2011+A1:2015, AAC	≥ 0.5	4	≥ 55[6)]	100	0.10	100	100
	≥ 0.6	6	≥ 55[6)]	100	0.13	100	100

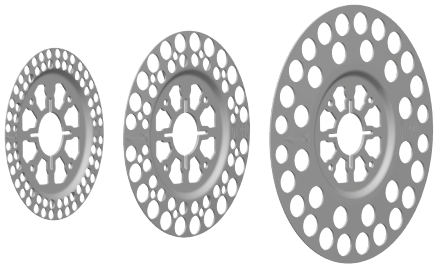
[1)] Plastic anchor for fixing of external thermal insulation composite systems with rendering acc. to ETA data. Only tension wind loads are permitted. The partial safety factors for material resistance as regulated in the assessment as well as a partial safety factor for load actions of γ_L = 1.5 are considered.
[2)] The given loads are valid for installation and use of fixations in dry base material for temperatures in the substrate up to +24 °C (resp. short term up to +40 °C).
[3)] Drilling method Hammer drilling. For details on installation data, see ETA.
[4)] Minimum possible axial spacing and edge distances acc. to ETA.
[5)] Restrictions concerning the manufacturer and the permissible hole patterns, see ETA.
[6)] Rotary drilling.

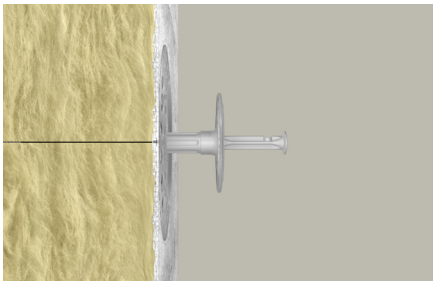

5

5
Discs

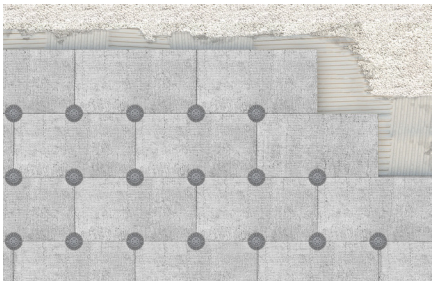
Additional plate DT

The plate for combination with TermoZ, FIF and TermoFix screw fixings





Use of additional DT plates for fastening mineral wool insulation boards



Flush installed ETICS fixings in combination DT plates on mineral wool boards.

Applications

- Used in combination with TermoZ, FIF and TermoFix anchors to fix ETICS insulating boards with low compressive strength.
- Flush to surface installation in ETICS insulation materials e.g. mineral wool.

Advantages

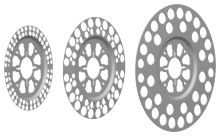
- The various plate diameters allow for individual adaptation to various insulation materials and requirements and offer the greatest flexibility with wide-ranging applications.

Functioning

- The discs are set in push-through installation.
- Push the selected DT insulating disc onto the TermoZ, FIF or TermoFix fixing and install the fixing.

Technical data

Additional plates DT

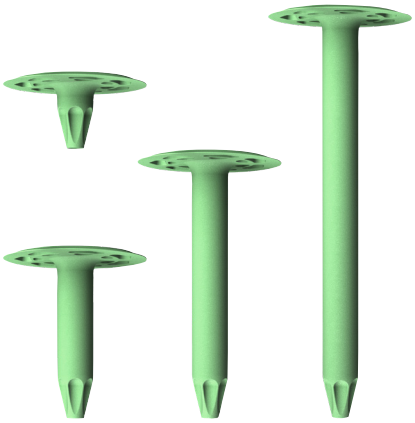


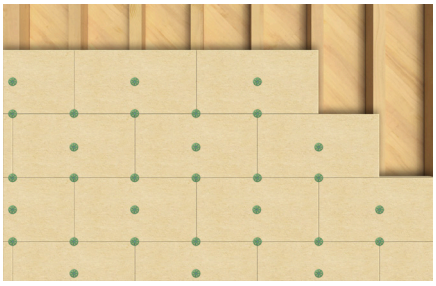
DT 90, DT 110, DT 140

Item	Item no.	Through hole d_f [mm]	Sales unit [pcs]
DT 90	**008889**	16	100
DT 110	**090745**	16	100
DT 140	**008690**	16	100

TermoFix H

The plate element for use with standard screws





Wood fibre boards on wooden constructions

Applications

- Fixing of ETICS insulation boards with standard screws

Advantages

- Closing plugs for the bit hole in the TermoFix H10 plate are included.
- The plate elements TermoFix H 50, 90 and 150 are sealed by using the sealing cap moulded on.
- An air column is produced between the screw head and sealing cap. This reduces thermal-transmission losses.
- Extremely economical thanks to different shank lengths. This allows the screw length to be reduced if necessary.
- Can be combined with the insulating discs DT 90, DT 110 and DT 140.

Building materials

- Panel building materials
- Solid wood

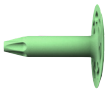
Functioning

- The fixing (disc and screw) is set in push-through installation.
- Non-load-bearing layers such as adhesive and old plaster should not serve as an anchoring base.

Technical data

TermoFix H

TermoFix H 10



TermoFix H 50

TermoFix H 90

TermoFix H 150

Item	Item no.	Shaft length L [mm]	Disc ø [mm]	Sealing [dN·m]	Colour	Sales unit [pcs]
TermoFix H 10	**514288**	29	60	PS plug (included)	green	200
TermoFix H 50	**514289**	69	60	Sealing cap (moulded on)	green	200
TermoFix H 90	**514290**	109	60	Sealing cap (moulded on)	green	200
TermoFix H 150	**514291**	169	60	Sealing cap (moulded on)	green	200

Insulation discs

Discs for combination with nail and frame fixings, as well as screws

Insulating materials in double- shell facades

Applications

- To fix soft and pressure-resistant insulation materials.
- DT90/4 on 4 mm remedial wall tie
- DT60/10, DTM60/10 and DTM70/10 in combination with 10 mm frame fixing
- DT90/8 and insulation washer 8/60 in combination with 8 mm frame or nail fixings
- HV and HK 36 with 5 mm screws

Advantages

- The various disc diameters allow for individual adaptation to various insulation materials and requirements and offer the greatest flexibility with wide-ranging applications.
- The flexible pins in the DT 90 ensure sustained pressure on the insulation, thus providing a secure hold.
- The DTM 60 made of stainless steel A4 makes it possible to use a frame fixing and allows for a secure fixing of the insulation material in façade construction in cases of high requirements.

Functioning

- The disc size is to be selected in line with the compressive strength of the insulating material.
- To be combined with anchors, screws or nails corresponding to the available base material.

Technical data

Insulation discs

HK 36 plastic

HV 36

ISO-Disc 8/60

DT 60/10

DT 90/4

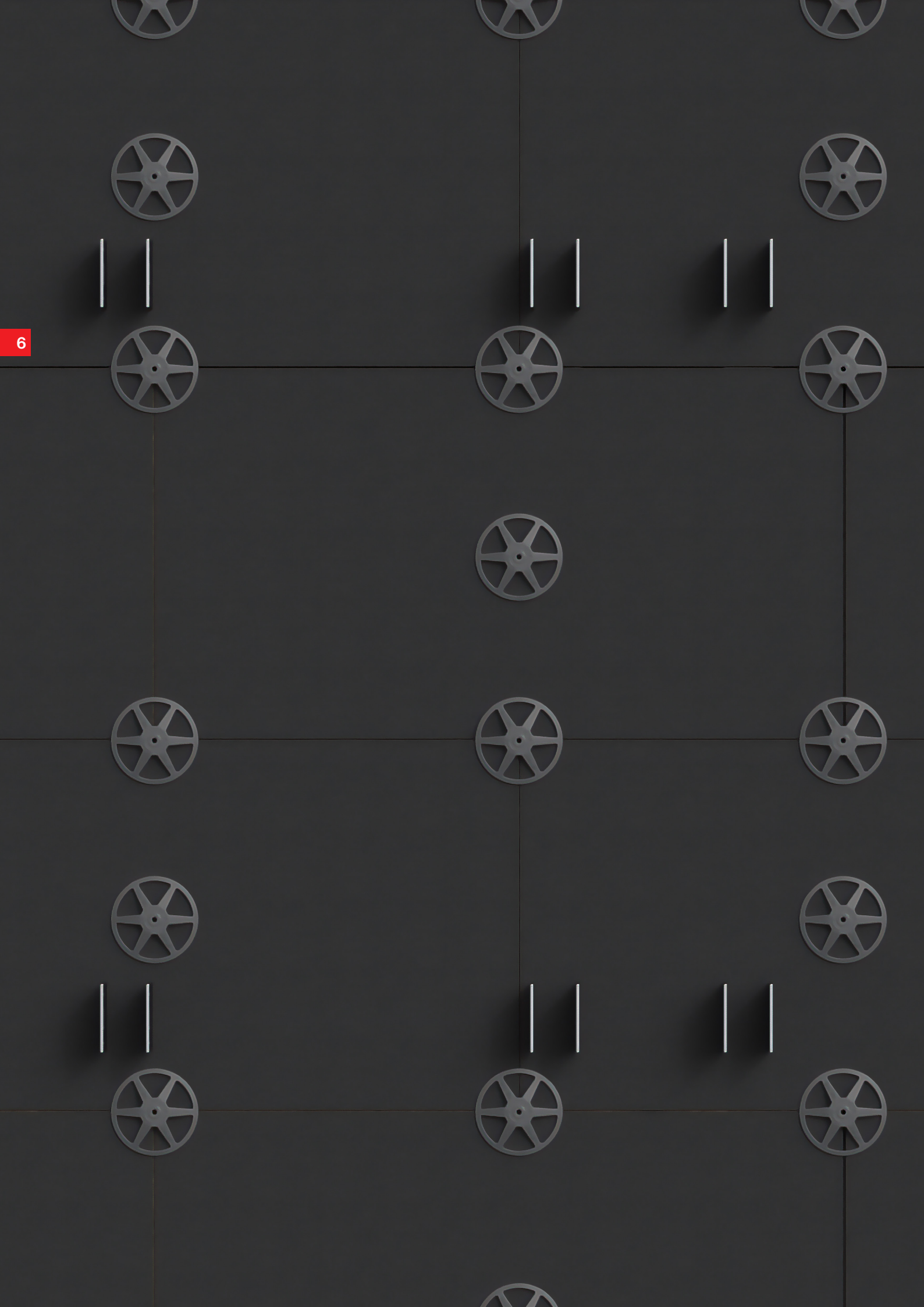
DT 90

DTM 80

DTM 80 A2

Item	Item no.	Approval DIBt	Disc ø [mm]	Disc height [mm]	Through hole d_f [mm]	Steel sheet thickness s [mm]	Sales unit [pcs]
HK 36 plastic	**004283**	–	36	4.5	5	–	100
HV 36 zinc	**004286**	–	36	3.5	5	0.7	100
HA 36 st. st. A4	**004285**	–	36	3.5	5	–	100
ISO-disk 8/60	**001680**	–	60	7.0	8	–	100
DT 60/10	**044317**	–	60	7.0	10	–	50
DT 90/4	**080957**[1)]	–	90	9.3	4	–	250
DT 90/8	**080958**	–	90	9.3	8.5	–	250
DTM 80	**536261**	●	80	3.6	11	0.5	250
DTM 80 A2	**536271**	●	80	3.6	11	0.5	250

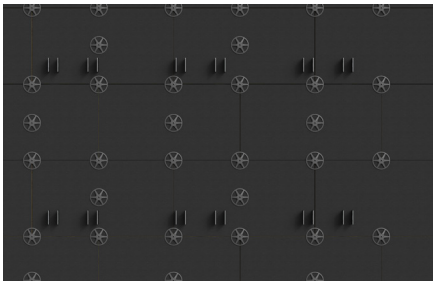
[1)] The central hole is adapted in such a way that the disc fits onto the 4 mm wire of a remedial wall tie



6
Others

Insulation support DHK / DHK 45

The cost-effective plastic insulation support for all conventional insulating boards



Insulation fixing in the ventilated facade

Applications

To fix soft and pressure-resistant insulating materials in rear-ventilated façades, such as:

- Mineral wool
- PU panels
- Light building boards made of wood wool
- Cork boards / coir matting
- Polystyrene
- Foam glass tiles

Advantages

- The optimised geometry of the expansion section ensures a low anchorage depth and reduces the amount of drilling required.
- The flexible DHK plate adapt to the insulating material, and ensures a sustained contact pressure.
- The simple hammerset installation allows for a quick installation process and thus reduces workload.
- The colouring of the DHK means that it does not stand out on black clad insulating material in rear-ventilated façades.

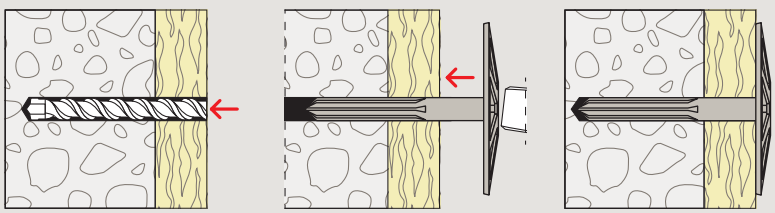
Building materials

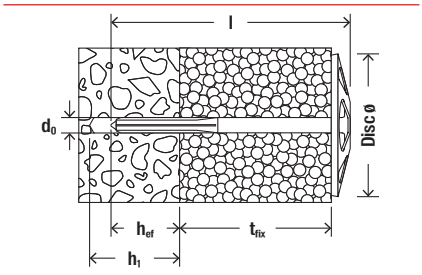
- Concrete
- Hollow blocks made from lightweight concrete
- Vertically perforated brick
- Perforated sand-lime brick
- Solid sand-lime brick
- Natural stone with dense structure
- Aerated concrete
- Solid brick made from lightweight concrete
- Solid brick

Functioning

- The DHK is set in push-through installation by using a hammer.
- The plate size of the insulation support is to be selected in line with the compressive strength of the insulating material: DHK 45 for pressure-resistant; DHK for soft insulating materials.
- The expansion of the ribs in the drill hole gives the DHK an ideal contact pressure.
- Temperature range when installed: -40 °C to +80 °C.

Installation DHK / DHK 45



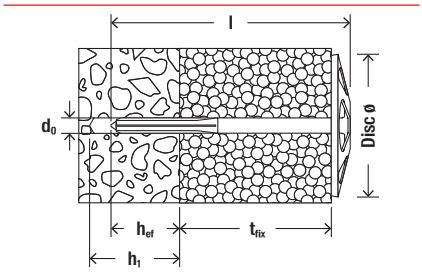


Technical data

Insulation support DHK

DHK

Item	Item no.	Drill diameter d_0 [mm]	Disc ø [mm]	Anchor length l [mm]	Min. drill hole depth h_1 [mm]	Effect. anchorage depth h_{ef} [mm]	Max. usable length t_{fix} [mm]	Sales unit [pcs]
DHK 40	**080937**	8	90	65	30	20	40	250
DHK 60	**080938**	8	90	85	30	20	60	250
DHK 80	**080939**	8	90	105	30	20	80	250
DHK 100	**080940**	8	90	125	30	20	100	250
DHK 120	**080941**	8	90	145	30	20	120	200
DHK 140	**080949**	8	90	165	30	20	140	200
DHK 160	**512150**	8	90	185	30	20	160	100
DHK 180	**512151**	8	90	205	30	20	180	100
DHK 200	**512153**	8	90	225	30	20	200	100
DHK 220	**512154**	8	90	245	30	20	220	100



Technical data

Insulation support DHK 45

DHK 45

Item	Item no.	Drill diameter d_0 [mm]	Disc ø [mm]	Anchor length l [mm]	Min. drill hole depth h_1 [mm]	Effect. anchorage depth h_{ef} [mm]	Max. usable length t_{fix} [mm]	Sales unit [pcs]
DHK 45/40	**080892**	8	45	65	30	20	40	250
DHK 45/60	**080893**	8	45	85	30	20	60	250
DHK 45/80	**080894**	8	45	105	30	20	80	250
DHK 45/100	**080895**	8	45	125	30	20	100	250

Loads

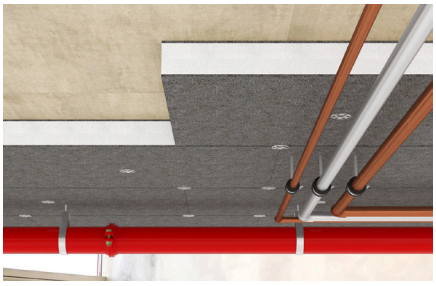
Insulation support DHK / DHK 45			
Recommended loads[1] for a single anchor.			
Type			**DHK**
Recommended loads in the respective base material F_{rec}[2]			
Concrete	≥ C12/15	**[kN]**	0.03
Solid brick	Mz 12	**[kN]**	0.03
Solid sand-lime brick	KS 12	**[kN]**	0.03
Perforated sand-lime brick	KSL 6	**[kN]**	0.03
Vertically perforated brick	Hlz 12	**[kN]**	0.02
Aerated concrete	≥ AAC 2 (G2)	**[kN]**	0.02

[1] Required safety factors are considered.
[2] Valid for tensile load.

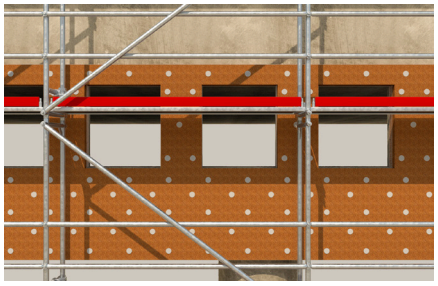
6

Insulation support DHM

The fire-protection-tested metal insulation support for fire-resistant insulating boards



Fire resistant wood wool panels on ceilings



Pressure-resistant insulation boards in ventilated facades

Applications

To fix fire-resistant soft or pressure-resistant insulating materials, such as:

- Mineral wool
- Light building boards made of wood wool
- Foam glass tiles

Also suitable for:

- Polystyrene boards
- Coir matting

Advantages

- The metal insulation support achieves fire resistance F 120. This means that it can be used where there are fire resistance requirements.
- The DTM 80 plate for soft insulating materials (available separately) simplifies storage and minimises costs.
- The simple hammerset installation allows a quick installation process and thus reduces workload.
- The shaft geometry allows setting in aerated concrete without pre-drilling, thus saving a stage of installation.
- Stainless steel version DHM A2 (1.4301) for wet and exterior applications.
- The DHM can be combined with coloured cover caps, which complete the design of the surface.

Certificates / Features

R 120

aBG
Z-21.8-2057

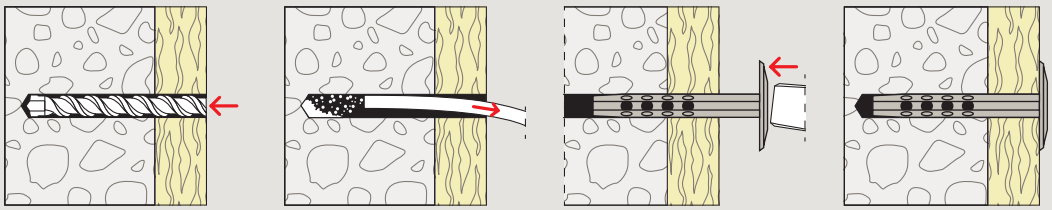
Building materials

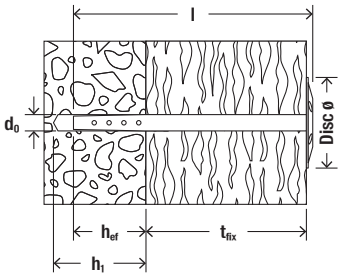
- Concrete
- Hollow blocks made from lightweight concrete
- Vertically perforated brick
- Perforated sand-lime brick
- Solid sand-lime brick
- Natural stone with dense structure
- Aerated concrete
- Solid brick made from lightweight concrete
- Solid brick

Functioning

- The insulation support is set in push-through installation by using a hammer.
- When hammered in, the expansion part tightens like a spring with the substrate.
- Use the DTM 80 plate (available separately) to fix soft insulating materials.
- Optionally, the DHM can be set with a hammer drill and the EMS M6 setting tool

Installation DHM





Technical data

Technical data Insulation support DHM

DHM

	Hot-dip galvanised steel	Stainless steel A2	Ap-pro-val	Drill diameter	Disc ø	Anchor length	Min. drill hole depth	Effect. ancho-rage depth	Usable length	Sales unit
	Item no.	Item no.	DIBt	d_0 [mm]	[mm]	l [mm]	h_1 [mm]	h_{ef} [mm]	t_{fix} [mm]	[pcs]
Item	**hdg**	**A2**								
DHM 40	**536253**	**536262**	●	8	45	80	50	40	10 - 40	250
DHM 70	**536254**	**536264**	●	8	45	110	50	40	40 - 70	250
DHM 100	**536256**	**536265**	●	8	45	140	50	40	70 - 100	250
DHM 130	**536257**	**536266**	●	8	45	170	50	40	100 - 130	250
DHM 160	**536258**	**536267**	●	8	45	200	50	40	130 - 160	250
DHM 210	**536259**	**536268**	●	8	45	250	50	40	170 - 210	125
DHM 260	**536260**	**536269**	●	8	45	300	50	40	220 - 260	125

Technical data

Cover cap DHM ADK

DHM ADK-W

DHM ADK-GR

DHM ADK-BG

	Item no.	Colour	Diameter d [mm]	Sales unit [pcs]
Item				
DHM ADK-W	**013330**	white	37.0	250
DHM ADK-GR	**046843**	grey	37.0	250
DHM ADK-BG	**046844**	beige	37.0	250

Loads

Insulation support DHM

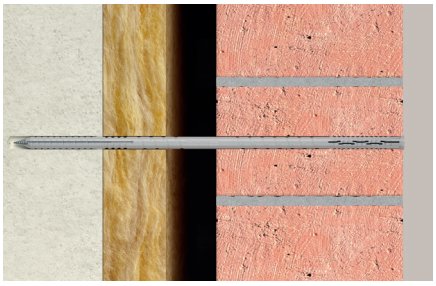
Recommended loads[1] for a single anchor.

Type			DHM
Recommended loads in the respective base material F_{rec} [2]			
Concrete[3]	≥ C12/15	[kN]	0.25
Solid brick	Mz 12	[kN]	0.25
Solid sand-lime brick	KS 12	[kN]	0.25
Aerated concrete (without pre-drilling)	≥ AAC 2	[kN]	0.10

[1] Required safety factors are considered.
[2] Valid for tensile load.
[3] Acc. to DIBt approval F_{Rd} = 0.10 kN in cracked and uncracked concrete ≥ C20/25. For the design the complete current DIBt approval Z-21.8-2057 has to be considered.

Remedial wall tie mechanical VBS-M

The quick repair for double- shell facades



Facing masonry

Repairing outer leafs

Applications

- VBS-M is especially suitable for applications where external thermal insulation composite systems (ETICS) have been previously installed.
- Retrorespective repair of facing masonry.

Advantages

- The approved fixing in stone and in joints from at least 50 mm facing masonry provides a high degree of flexibility and security.
- Use in joints and with a low anchorage depth of just 50 mm allows for a quick and economical installation.
- The small anchor rim and screw head allow for a surface-flush or deep-set installation.
- The drill hole can be retrospectively sealed so that it is no longer visible in the façade.
- A drip coil prevents condensate running into the load-bearing layer, thus preventing frost and corrosive damage.

Certificates / Features

Building materials

- Facing masonry with and without an air layer

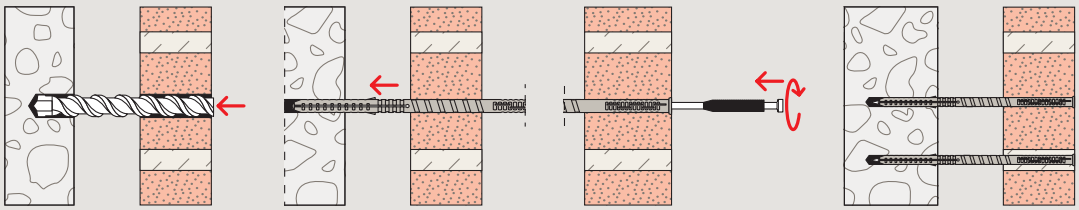
Versions

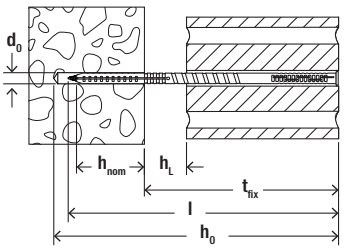
- Galvanised steel
- Stainless steel

Functioning

- The remedial wall tie VBS-M is set in the load-bearing layer and into facing masonry using push-through installation.
- In accordance with the approval, no drill hole cleaning is required.
- The two expansion zones in the load-bearing layer and in the facing masonry ensure a secure fixation.
- The plug doesn‘t fix into the facing masonry until the head grips into the load-bearing layer. This ensures the very best installation safety.

Installation VBS-M





Technical data

Remedial wall tie mechanical VBS-M

VBS-M

Item	Galvanised steel Item no. gvz	Stainless steel Item no. R	Approval DIBt	Max. shell distance at 115 mm facing masonry, flush installation [mm]	Max. shell distance at 115 mm facing masonry, 20 mm sunk installation [mm]	Facing masonry + cavity t_{fix} [mm]	Drill diameter d_0 [mm]	Drill hole depth h_0 [mm]	Effect. anchorage depth h_{ef} [mm]	Anchor length l [mm]	Sales unit [pcs]
VBS-M 8 x 120	**514243**[1]	**514236**[1]	●	20	–	70	8	140	>50	120	100
VBS-M 8 x 185	**514244**	**514237**	●	20	40	135	8	205	>50	185	100
VBS-M 8 x 205	**514245**	**514238**	●	40	60	155	8	225	>50	205	100
VBS-M 8 x 225	**514246**	**514239**	●	60	80	175	8	245	>50	225	100
VBS-M 8 x 245	**514247**	**514240**	●	80	100	195	8	265	>50	245	100
VBS-M 8 x 265	**514248**	**514241**	●	100	120	215	8	285	>50	265	100
VBS-M 8 x 285	**514249**	**514242**	●	120	140	235	8	305	>50	285	100

[1] Max. 20 mm mortar layer in the case of 50 mm thick economy facing.

Accessories

ProfiBit

FPB TX

Item	Item no.	Description	Sales unit [pcs]
FPB TX25 ProfiBit	**517693**	fischer ProfiBit long, which can be extended to 50 mm bit, allows for deep setting in stone and in the bed joint	1

Drill bits

Drill bits

SDS Plus II / Pointer M

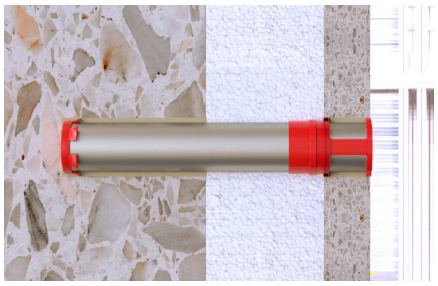
SDS Plus II Pointer

Item	Item no.	Description	Sales unit [pcs]
Pointer M 8/100/400	**517690**	fischer masonry drill bit with SDS fixture and short flute, ground sharp, for rotary drilling in perforated brick and in the bed joint	1
SDS Plus II 8/400/460	**531785**	fischer hammer drill bit for drilling in concrete and in the facing brick	1

Weather facing reconstruction system FWS II

The economical solution for the repair of triple-skin outer wall panels

Repairing weather shells



Detail: Repairing weather shells

Applications

- For post-installation securing of triple-skin outer wall panels
- Strengthening outer wall panels for additional exterior insulation

Advantages

- The FWS II achieves a high shear load-bearing capacity due to its large anchor diameter. This reduces the number of reconstruction anchors needed for each plate to a minimum, thus saving costs.
- The drill hole can be drilled in one step using standard diamond drill bits. This ensures quick progress is made.
- Installation is already approved from a sub-base thickness ≥ 80 mm.
- Approval with a new measuring strategy allows a safer and economically static calculation while making it possible to document loads from temperature changes.

Certificates / Features

aBG
Z-21.8-2029

Building materials

- Triple-skin outer wall panels made of concrete ≥ C12/15

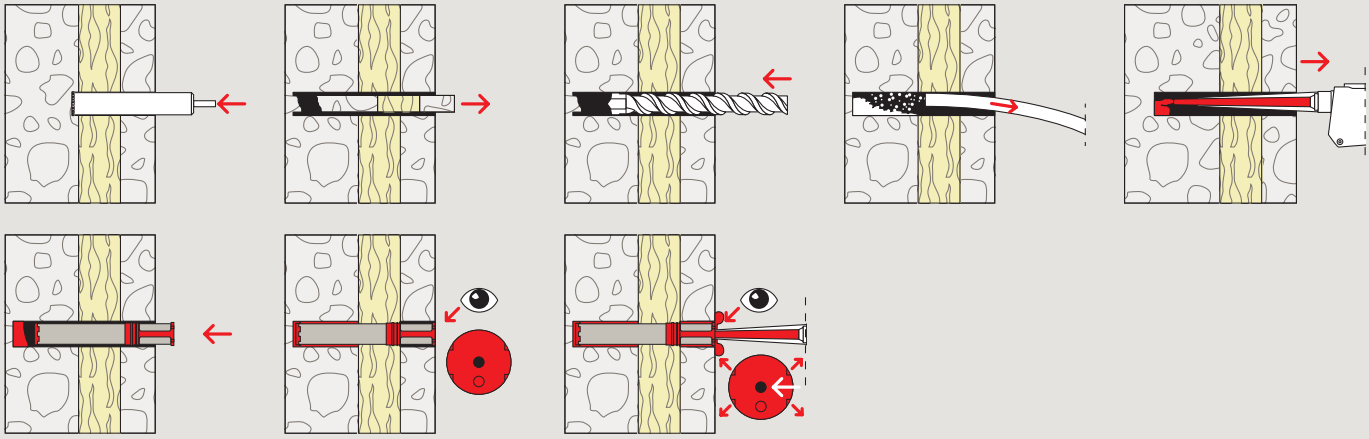
Versions

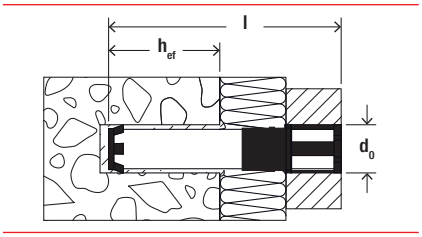
Stainless steel

Functioning

- The FWS II weather facing reconstruction anchors can be bedded in mortar into the load-bearing skin and weather shell with the FIS V Plus, FIS VW Plus or FIS VS Plus / FIS V, FIS VW or FIS VS injection mortar.
- The red plastic coating protects the insulation from being penetrated with mortar.
- You can see the correct anchor filling with the weather shell through the inspection openings on the head of the anchor.

Installation in triple skin outer wall panels with FIS V Plus and FWS II-A





Technical data

Weather facing reconstruction system FWS II

FWS II

Item	Item no.	Approval DIBt	Total length l [mm]	Nom. drill diameter d_B [mm]	Effect. anchorage depth in the load-bearing skin h_v [mm]	Anchor per 360 ml-cartridge	Sales unit [pcs]
FWS II - A 180	**532883**	●	180	40 - 41	70	5	5
FWS II - A 205	**532884**	●	205	40 - 41	70	5	5
FWS II - A 230	**532885**	●	230	40 - 41	70	5	5

Accessories

Injection mortar FIS V Plus

FIS V Plus 300 T

FIS VS Plus 300 T

FIS VW Plus 300 T

FIS V Plus 360 S

FIS V Plus 410 C

FIS V Plus 825 S

Item	Item no.	Approval ETA	Approval DIBt	Approval ICC	Languages on the cartridge	Scale unit	Contents	Sales unit [pcs]
FIS V Plus 300 T	**569074**	●	●	●	DA, FI, NO, SV	150	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus with transparent clip	1
FIS V Plus 300 T	**563292**	●	●	●	EN, ES, PT	150	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 300 T	**563282**	●	●	●	DE, EN, IT	150	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 825 S	**567511**	●	●	●	DE, EN, FR, IT, NL	415	1 x Cartridge 825 ml, 2 x static mixer FIS JMR 825	1
FIS VW Plus 300 T	**563293**	●	●	●	DE, EN, HU, IT	150	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 300 T	**569254**	●	●	●	AR, EN, FR	150	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 300 T	**563279**	●	●	●	DE, FR, NL	150	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus with transparent clip	1
FIS VS Plus 300 T	**563280**	●	●	●	EN, ES, PT	150	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus	1
FIS VS Plus 300 T	**563278**	●	●	●	ES, PT	150	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus with transparent clip	1

Accessoires

Injection mortar FIS V Plus


FIS V Plus 300 T


FIS VS Plus 300 T


FIS VW Plus 300 T


FIS V Plus 360 S


FIS V Plus 410 C


FIS V Plus 825 S

Item	Item no.	Approval ETA	DIBt	ICC	Languages on the cartridge	Scale unit	Contents	Sales unit [pcs]
FIS VS Plus 300 T	**563291**	●	●	●	FR	150	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus with transparent clip	1
FIS VS Plus 300 T	**563290**	●	●	●	EL, HU, PL, RO	150	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus with transparent clip	1
FIS VW Plus 300 T	**563286**	●	●	●	DA, FI, NO, SV	150	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus with transparent clip	1
FIS VW Plus 300 T	**563287**	●	●	●	CS, HU, PL, RU	150	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 360 S	**558747**	●	●	●	AR, EN, ZH	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 360 S	**558762**	●	●	●	CS, HU, SK	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 360 S	**558752**	●	●	●	DE, FR, NL	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 360 S	**558746**	●	●	●	EN, ES, PT	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 360 S	**558758**	●	●	●	EN, ES, PT (Americas)	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 360 S	**560635**	●	●	●	AR, EN, FR	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 360 S	**558753**	●	●	●	IT, PL, RO	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 360 S	**561055**	●	●	●	EN, PL, UK	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 360 S	**558754**	●	●	●	AR, EL, TR	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS VS Plus 360 S	**558750**	●	●	●	EN, ES, PT	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS VS Plus 360 S	**561057**	●	●	●	EN, PL, UK	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS VS Plus 360 S	**558749**	●	●	●	JA, KO, ZH	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS VW Plus 360 S	**558768**	●	●	●	CS, HU, SK	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS VW Plus 360 S	**558765**	●	●	●	DE, FR, NL	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS VW Plus 360 S	**558764**	●	●	●	EN, HU	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS VW Plus 360 S	**562602**	●	●	●	EN, PL, UK	180	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 410 C	**558780**	●	●	●	DE, EN, IT	200	1 x Cartridge 410 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 825 S	**567512**	●	●	●	EN, ES, FR, PT, TR	415	1 x Cartridge 825 ml, 2 x static mixer FIS JMR 825	1
FIS V Plus 825 S	**567513**	●	●	●	CS, EN, PL, RU, SK	415	1 x Cartridge 825 ml, 2 x static mixer FIS JMR 825	1

Loads

Weather facing reconstruction system FWS II

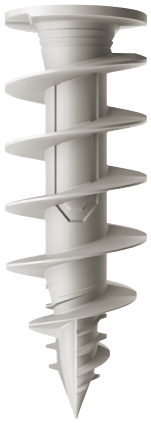
Permissible shear loads[1) 2)] for a single anchor in a load-bearing skin made of concrete ≥ C12/15.
For the design the complete approval Z-21.8-2029 has to be considered.

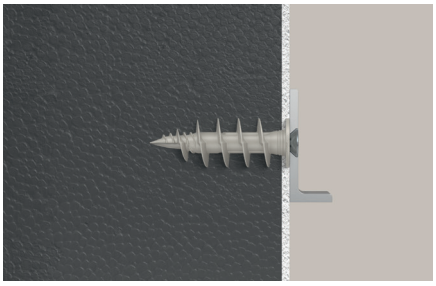
						Cracked and non-cracked concrete	
Type	Effective anchorage depth in the load-bearing skin h_{ef} ≥ [mm]	Thickness of load-bearing layer h_T ≥ [mm]	Thickness of - thermal insulation[3)] h_D ≤ [mm]	Thickness of- outer leaf h_w ≥ [mm]	Permissible bending moment M_{zul} [Nm]	Permissible shear load[4)] V_{zul} [kN]	Mindestrand-abstand[5)] c_{min} (c_W, c_T) [mm]
FWS II - A 180	70	80	70	40	1310	11.5	150
FWS II - A 205	70	80	95	40	1310	9.5	150
FWS II - A 230	70	80	120	40	1310	8.1	150

[1)] Required safety factors are considered. The given loads are valid under the pre-condition that an additional thermal insulation will be applied on the weather facing.
[2)] The given loads are valid for fixations in dry and humid concrete for temperatures in the substrate up to +50 °C (resp. short term up to 80 °C) and drillhole cleaning according to approval.
[3)] For bigger insulation thicknesses special lengths are possible.
[4)] The determination of the permissible shear load for special lengths is done according Annex 3 and 4 of the approval.
[5)] For exact arrangement of the bolts as well as for eventually needed additional proofs see approval.

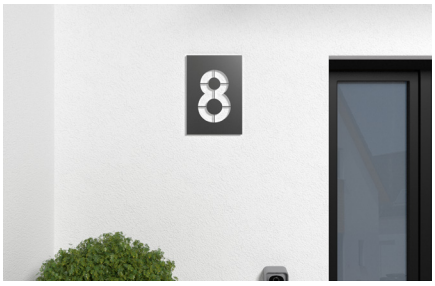
Insulation plug FID II

The insulation plug for lightweight attachments to the ETICS





FID II in plastered polystyrene



Fixings of house numbers on plastered facade

Applications

- Outdoor lighting
- Motion detector
- House number
- Doorbell

Advantages

- The use of standard screws with a diameter of 3.5 - 4.5 mm allows flexible use.
- Due to the minimal head diameter, the plug edge is not visible even with narrow attachments.
- Maximum stability due to glass-fibre reinforced plastic.
- Due to the special tip geometry, the plug screws through plaster thicknesses of up to 10 mm without pre-drilling, which enables a fast processing.
- The FID II is easily set with a standard TX 40 bit.
- The fischer insulation plug enables an universal use in all common insulation materials.

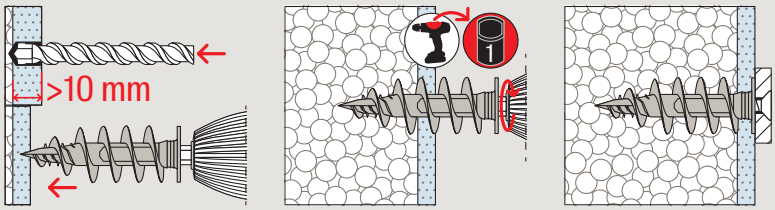
Building materials

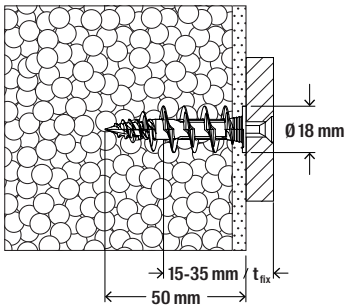
- Mineral wool
- Expanded polystyrene (EPS)
- Extruded polystyrene (XPS)
- Wood fibre
- Polyurethane rigid foam (PU)

Functioning

- The FID II is placed in the plastered facade with a cordless screwdriver.
- For thick layers of plaster from 10 mm pre-drilling is recommended.
- The insulation plug anchors itself firmly in the insulation material without destroying the plaster.
- After successful pre-positioned installation, the FID II can be additionally sealed with a sealing compound.

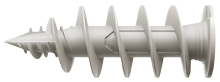
Installation FID II





Technical data

Insulation plug FID II



FID II

	Item no.	Anchor length l [mm]	Drill diameter d_0 [mm]	Wood and chipboard screws d_s [mm]	Drive	Sales unit [pcs]
Item						
FID II	**570347**	50	8	3.5 - 4.5	TX40	50
FID II K (4)	**570348**	50	8	3.5 - 4.5	TX40	1

Loads

Insulation plug FID II & FID II Plus

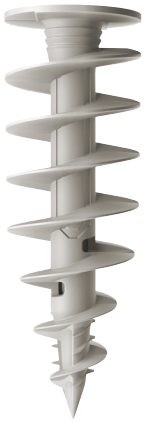
Recommended loads[1] of a single anchor.
The given loads are valid for chipboard screws with specified diameter and only for the specified insulation types with plaster thicknesses.

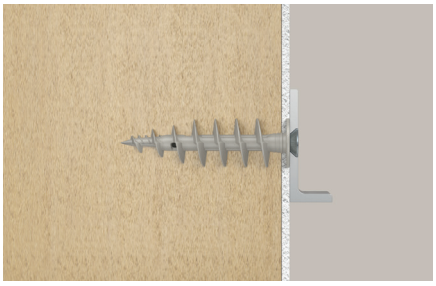
Type			FID II	FID II Plus	FID II Plus Fill&Fix[3]	FID II Plus 1C PU foam[4]
Diameter chipboard screw		[mm]	4	5	5	5
Recommended load in the respective insulation material N_{rec} [2]						
EPS with plaster	Plaster thickness 8 mm	[kN]	0.15	0.20	0.40	0.40[5]
Mineral wool with plaster	Plaster thickness 8 mm	[kN]	0.05	0.10	0.20	0.20[6]
Wood fibre with plaster	Plaster thickness 13 mm	[kN]	0.15	0.20	0.40	-

[1] Required safety factors are considered.
[2] Valid for tensile load, transverse load and diagonal pull.
[3] Injection with fischer Fill&Fix injection fixing, injection quantity in EPS: 35 scale parts, in mineral wool & wood fibre: 60 scale parts, curing time: 2 min.
[4] Injection with fischer 1C PU foam.
[5] Three short sprays (observe absorption capacity of insulation material, adjust interval), curing time: 14-24 h. Protection of the plaster façade from chemical residues is recommended.
[6] Five short sprays (observe absorption capacity of insulation material, adjust interval), curing time: 14-24 h. Protection of the plaster façade from chemical residues is recommended.

Insulation plug FID II Plus

The strong insulation plug for medium heavy attachments on ETICS





FID II Plus in plastered wood fibreboard

Fixing of parcel boxes on plastered facade.

Applications

- Letterbox
- Window shutter holder
- Wallbox

Advantages

- The use of standard screws with a diameter of 4.5 - 6 mm allows flexible use.
- Due to the special tip geometry, the plug screws through plaster thicknesses of up to 10 mm without pre-drilling, which enables a fast processing.
- Maximum stability due to glass-fibre reinforced plastic.
- The additional use of a chemical component, such as the fischer Fill&Fix or fischer 1c PU foam, can significantly increase the loads.
- The FID II Plus is easily set with a standard TX 40 drive.
- The fischer insulation plug enables an universal use in all common insulation materials.

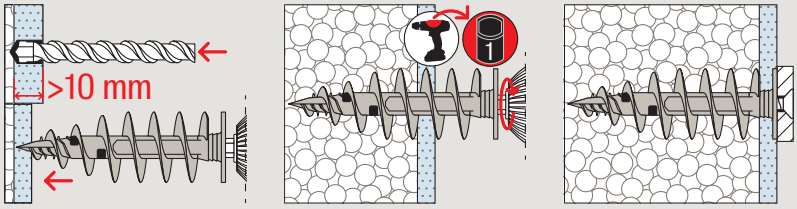
Building materials

- Mineral wool
- Expanded polystyrene (EPS)
- Extruded polystyrene (XPS)
- Wood fibre
- Polyurethane rigid foam (PU)

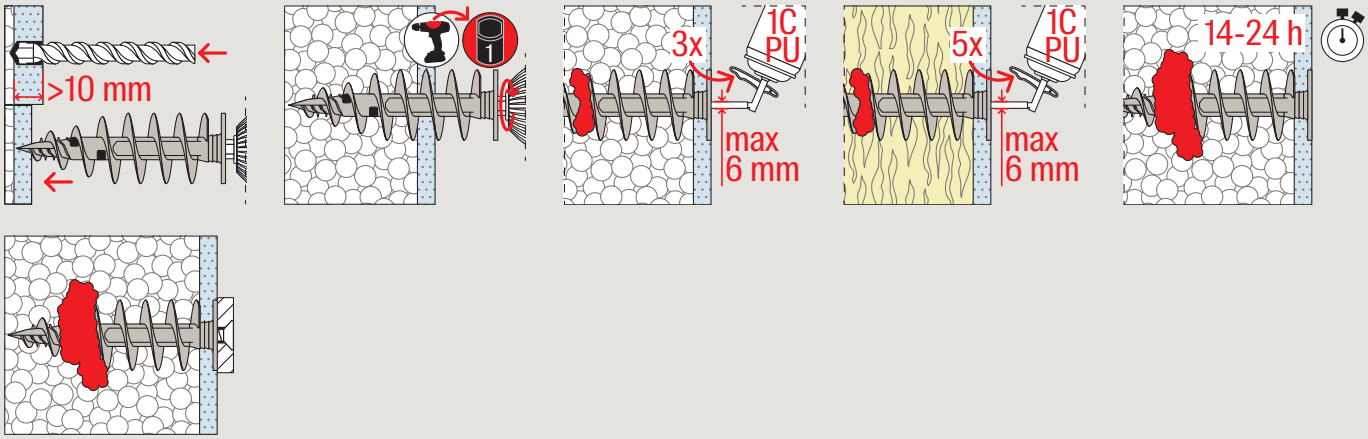
Functioning

- The FID II Plus is placed in the plastered facade with a cordless screwdriver. For thick layers of plaster starting from 10 mm pre-drilling is recommended.
- The insulation plug anchors itself firmly in the insulation material without destroying the plaster.
- For a load increase, 1c PU foam or the fischer Fill&Fix can be inserted into the FID II Plus. For an exact application guideline of the chemical component, please refer to the load table.
- After curing time of the chemical component (1c PU foam: 14 - 24 h, Fill&Fix: 2 min) the screw can be installed.
- After successful pre-positioned installation, the FID II Plus can be additionally sealed with a sealing compound.

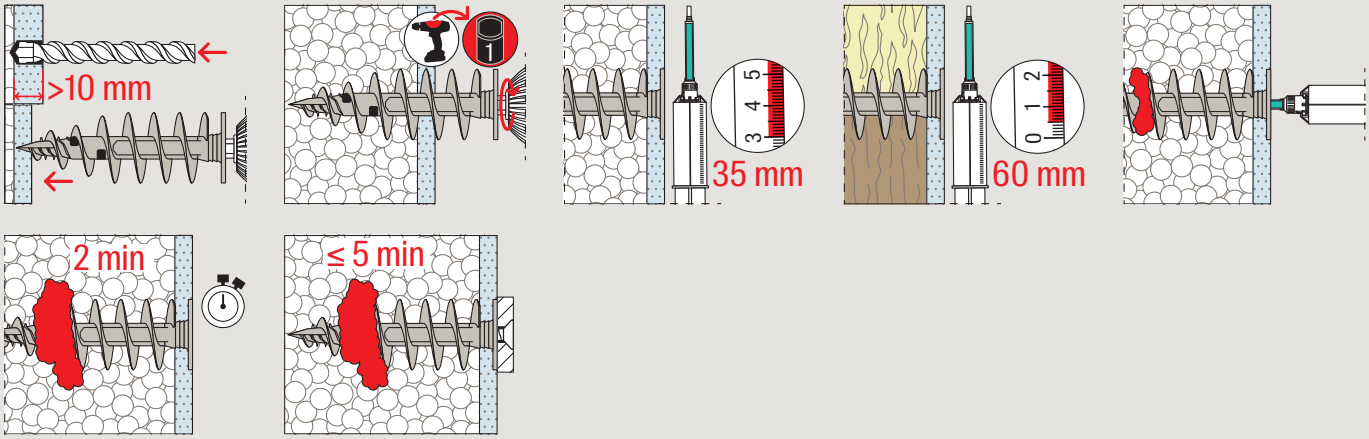
Installation FID II Plus

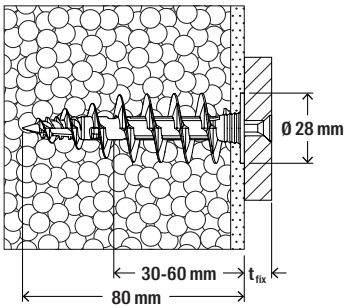


Installation FID II Plus with 1c PU foam



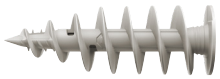
Installation FID II Plus with fischer Fill&Fix





Technical data

Insulation plug FID II Plus



FID II Plus

Item	Item no.	Anchor length l [mm]	Drill diameter d_0 [mm]	Wood and chipboard screws d_s [mm]	Drive	Sales unit [pcs]
FID II Plus	**570349**	80	8	4.5 - 6.0	TX40	25
FID II Plus K	**570350**	80	8	4.5 - 6.0	TX40	1

Technical data

Fill & Fix injection fixing

Fill&Fix

Item	Item no.	Contents	Sales unit [pcs]
Fill & Fix K (D)	**051097**	1 x Cartridge 25 ml, 2 x static mixer, 4 x anchor sleeves, 2 x extension tubes	1
Fill & Fix K (D/F)	**503227**	1 x Cartridge 25 ml, 2 x static mixer, 4 x anchor sleeves, 2 x extension tubes	1
Fill & Fix K (F)	**513500**	1 x Cartridge 25 ml, 2 x static mixer, 4 x anchor sleeves, 2 x extension tubes	1
Fill & Fix K (S/DK)	**505083**	1 x Cartridge 25 ml, 2 x static mixer, 4 x anchor sleeves, 2 x extension tubes	1

Dangerous goods - no express shipping possible.

Technical data

1c rapid installation foam PU S 500/750 B2

PU S 500

PU S 750

Item	Item no.	Languages on the cartridge	Contents [ml]	Max. foam yield (free foaming) [l]	Colour	Sales unit [pcs]
PU S 1/500 B2	**040300**[1)2)]	DE	500	30	beige	1
PU S 750 B2	**040301**[1)2)]	DE	750	45	beige	1

[1)] Dangerous goods - no express shipping possible.
[2)] Without protective gloves, for commercial users only.

Loads

Insulation plug FID II & FID II Plus

Recommended loads[1] of a single anchor.
The given loads are valid for chipboard screws with specified diameter and only for the specified insulation types with plaster thicknesses.

Type			FID II	FID II Plus	FID II Plus Fill&Fix[3]	FID II Plus 1C PU foam[4]
Diameter chipboard screw		**[mm]**	4	5	5	5
Recommended load in the respective insulation material N_{rec} [2]						
EPS with plaster	Plaster thickness 8 mm	**[kN]**	0.15	0.20	0.40	0.40[5]
Mineral wool with plaster	Plaster thickness 8 mm	**[kN]**	0.05	0.10	0.20	0.20[6]
Wood fibre with plaster	Plaster thickness 13 mm	**[kN]**	0.15	0.20	0.40	-

[1] Required safety factors are considered.
[2] Valid for tensile load, transverse load and diagonal pull.
[3] Injection with fischer Fill&Fix injection fixing, injection quantity in EPS: 35 scale parts, in mineral wool & wood fibre: 60 scale parts, curing time: 2 min.
[4] Injection with fischer 1C PU foam.
[5] Three short sprays (observe absorption capacity of insulation material, adjust interval), curing time: 14-24 h. Protection of the plaster façade from chemical residues is recommended.
[6] Five short sprays (observe absorption capacity of insulation material, adjust interval), curing time: 14-24 h. Protection of the plaster façade from chemical residues is recommended.

Insulation fixing FID-R

Thermal bridge-free installation of rainwater downpipes on ETICS

Fastening of a rainwater downpipe with the FID-R

Applications

- Thermal bridge-free installation of rainwater downpipes

Advantages

- Since the anchor is set exclusively in the insulation itself, fixtures can be installed without thermal bridges. The anchor offers an energy-optimised fixing.
- The hard-centering tip cuts its own way through the plaster, without the need for pre-drilling, thus saving a stage of installation.
- The TX-drive allows a setting with standard tools, thus allowing for a fast and economic installation.

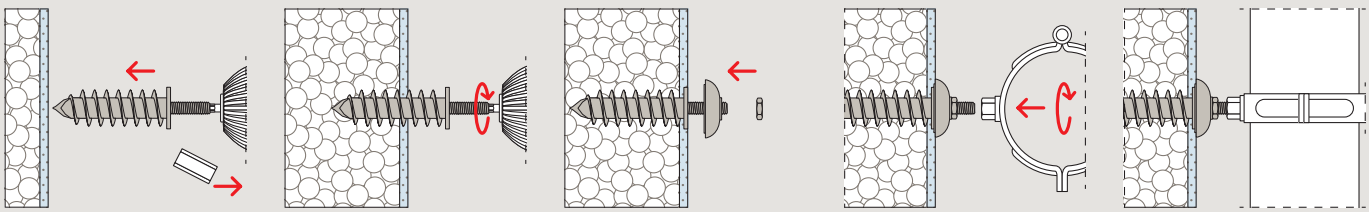
Building materials

- Polystyrene insulating boards
- Wood fibre insulating boards
- External thermal insulation composite system (ETICS)

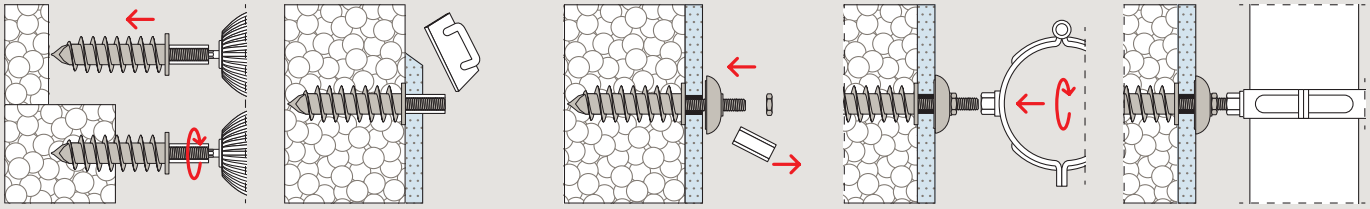
Functioning

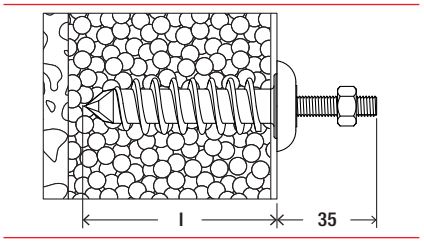
- The installation is carried out without any special tools.
- The spiral thread taps itself in the insulation board.
- For the installation in wood fibre insulating boards a pre-drilling of the insulating board with 16 mm is necessary.
- For the installation before plastering the threaded rod is protected by a tube sleeve.
- The included white covering rosette with glued on PE sealing disc protects again humidity.

Installation in plastered insulating boards



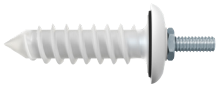
Installation in non-plastered insulating boards





Technical data

Insulation fixing FID-R



FID-R

Item	Item no.	Anchor length l [mm]	Min. bolt penetration $l_{E,min}$ [mm]	Drive	Thread A	Sales unit [pcs]
FID-R zl	**548404**	95	95	TX25	M10	25
FID-R zl B	**548405**	95	95	TX25	M10	1

Loads

Insulation fixing FID-R

Recommended loads[1] for a single anchor.

Type			FID-R
Recommended loads in the respective base material N_{rec} [2]			
Polystyrene	PS 15	**[kN]**	0.17
Polystyrene	PS 20	**[kN]**	0.20

[1] Required safety factors are considered.
[2] Valid for tensile loads.

Insulation screw FID-Z

The self-drilling insulation screw for thin metal sheets on ETICS

Fixing of metal sheets using the FID-Z

Direct fastening of thin metal sheets on ETICS facades

Applications

- Direct fastening of thin metal sheets on ETICS façades
- Cross-cutting strips
- Splash guards
- Metal sheets
- Custodies

Advantages

- The special tip geometry of the FID-Z enables direct mounting of common, thin sheets (<0,8mm) without pre-drilling on the ETICS for time-saving installation.
- The sealing disc of the FID-Z prevents water from penetrating the façade. This prevents structural damage.
- The optimized thread geometry guarantees uniform screw insertion for a clean setting result.

Building materials

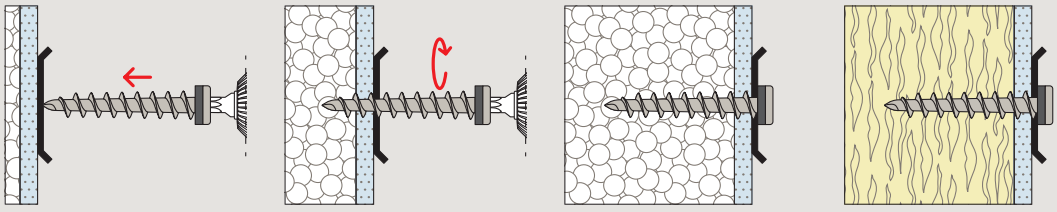
ETICS with:

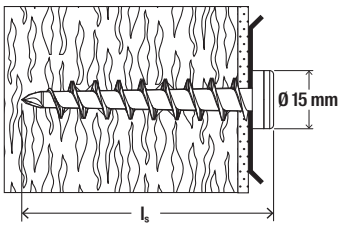
- Mineral wool
- Polystyrene
- Polyurethane
- Wood fibre

Functioning

- The FID-Z is suitable for direct mounting of thin metal sheets (<0,8 mm) on ETICS without pre-drilling.
- When screwing in, the tip drills directly through the metal sheet.
- By tightening the screw, the sealing washer is pressed against the attachment part and seals.

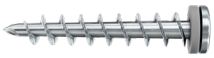
Installation FID-Z





Technical data

Insulation screw FID-Z



FID-Z

	Item no.	Screw length l_s [mm]	Drill hole diameter in fixture d_f [mm]	Drive	Max. fixture thickness t_{fix} [mm]	Sales unit [pcs]
Item						
FID-Z	**563537**	65	10	TX30	3	50

Loads

Insulation screw FID-Z

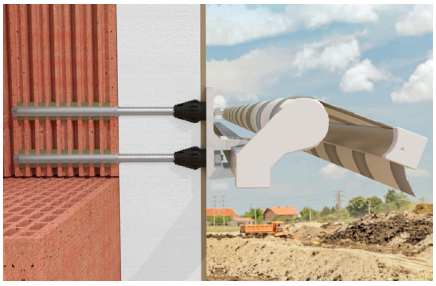
Recommended loads[1] for a single anchor.

Type		**FID-Z**
Recommended loads in the respective base material N_{rec}[2]		
ETICS with EPS	**[kN]**	0.05
ETICS with mineral wool	**[kN]**	0.03
ETICS with wood fibre	**[kN]**	0.08
ETICS with XPS	**[kN]**	0.06

[1] Required safety factors are considered.
[2] Valid for tensile loads when fixing to plastered insulation materials.

Stand-off installation TherMax 12/16

The approved stand-off installation with thermal separation in external thermal insulation composite systems



Awnings

Satellite dishes and air conditioning units

Applications

For the thermally separated fixing of:

- Awnings
- Canopies
- French balcony railings
- Air conditioning units
- Satellite dishes

Advantages

- When combined with the injection mortars FIS EM Plus, FIS V Plus, FIS SB and FIS Green, the stand-off installation is approved for high loads in a range of materials. This allows for a secure fixing.
- Usable lengths of 62 to 290mm can be covered with just one TherMax.
- The plastic cone creates a thermal barrier between the fixture and the inner fixture, and offers an energy-optimised fixing.
- The glass-fibre-reinforced plastic cone cuts its own way through the ETICS with a positive fit, and allows for a simple, fast and adjustable installation without the need for any special tools.

Certificates / Features

Building materials

Approved for:

- Concrete, cracked and non-cracked
- Vertically perforated brick
- Hollow blocks made from lightweight concrete
- Perforated sand-lime brick
- Solid sand-lime brick
- Solid brick
- Aerated concrete

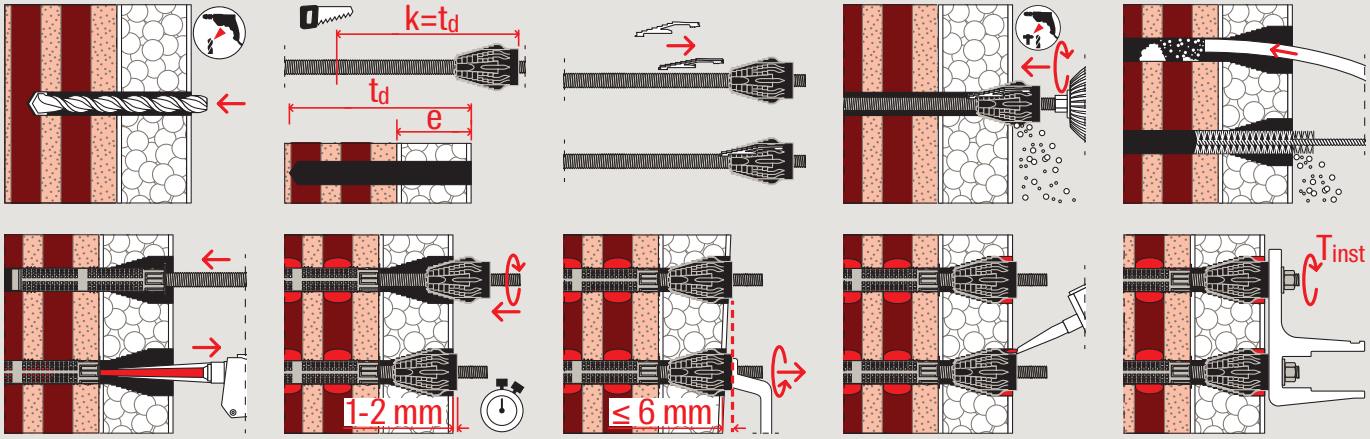
Versions

- Galvanised steel
- Stainless steel

Functioning

- The TherMax 12 and 16 systems are suitable for pre-positioned installation.
- The self-tapping, glass-fibre-reinforced cone cuts its own way through the plaster into the insulation during installation.
- The anti-cold cone uses a thermal barrier to minimise heat losses.
- In the case of resistant plaster (e.g. thick cement plaster), it is recommended that the TherMax cutting blade included is used for grinding out the plaster.
- The sealing of the annular gap with sealing adhesive Multi MS seals the facade at plaster level.

Installation TherMax 12/16



Technical data

Stand-off installation TherMax 12/16

TherMax 12/110 M12

TherMax 16/170 M12

TherMax HWK

	Galvanised steel	Stainless steel	Approval	Contents	Sales unit
	Item no.	Item no.	DIBt		[pcs]
Item	**gvz**	**R**			
TherMax 12/110 M12	**051291**	–	●	20 x TherMax M12 20 x Sleeve 20 x 130 5 x Bit 5 x Cutting blade 5 x Manual	20
TherMax 12/110 M12 (2)	**051290**	–	●	2 x TherMax M12 2 x Sleeve 20 x 130 1 x Bit 1 x Cutting blade 1 x Multi MS white 80 ml 1 x Manual	1
TherMax 12/110 M12 R	–	**051537**	●	10 x TherMax M12 R 10 x Sleeve 20 x 130 3 x Bit 3 x Cutting blade 3 x Manual	10
TherMax 16/170 M12	**051293**	–	●	20 x TherMax M16 20 x Sleeve 20 x 200 5 x Bit 5 x Cutting blade 5 x Extension hose 5 x Manual	20
TherMax 16/170 M12 (2)	**051292**	–	●	2 x TherMax M16 2 x Sleeve 20 x 200 1 x Bit 1 x Cutting blade 1 x Extension hose 1 x Multi MS white 80 ml 1 x Manual	1
TherMax 16/170 M12 R	–	**051543**	●	10 x TherMax M16 R 10 x Sleeve 20 x 200 3 x Bit 3 x Cutting blade 3 x Extension hose 3 x Manual	10

Technical data

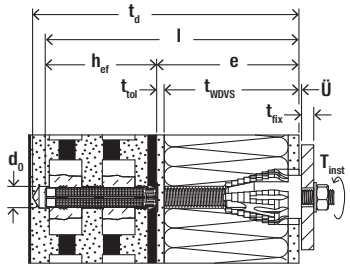
Stand-off installation TherMax 12/16

TherMax 12/110 M12

TherMax 16/170 M12

TherMax HWK

	Galvanised steel Item no.	Stainless steel Item no.	Approval DIBt	Contents	Sales unit [pcs]
Item	**gvz**	**R**			
TherMax 12/110 M12 HWK	**571023**	**–**	●	25 x TherMax M12 25 x Sleeve 20 x 130 6 x Bit 6 x Cutting blade 6 x Manual	1
TherMax 16/170 M12 HWK	**571024**	**–**	●	25 x TherMax M16 25 x Sleeve 20 x 200 6 x Bit 6 x Cutting blade 6 x Extension hose 6 x Manual	1



Installation data

Type	Length of TherMax incl. anti-cold cone l [mm]	Building material + insulation Threaded rod in building material	Building material	Suitable injection anchor sleeve	Drill hole diameter d_0 [mm]	Min. anchorage depth h_{ef} [mm]	Drill hole depth t_d [mm]	Thickness of non-bearing layer e [mm]	Fixture Max. fixture thickness t_{fix} [mm]	Connection thread	Max. installation torque T_{inst} [Nm]	Required resin quantity [Scale unit]
TherMax M12	**240**	**M12**	**Concrete**	-	14	70	h_{ef} + e	62 - 170	16[1)]	M12	20	5
	240	**M12**	**Solid brick**	-	14	80	h_{ef} + e	62 - 160	16[1)]	M12	20	6
	240	**M12**	**Perforated brick**	FIS H 20x130 K	20	130	h_{ef} + e + 10 mm	62 - 110	16[1)]	M12	20	26
	240	**M12**	**Aerated concrete**	-	14	100	h_{ef} + e	62 - 140	16[1)]	M12	20	8
TherMax M16	**370**	**M16**	**Concrete**	-	18	80	h_{ef} + e	62 - 290	16[1)]	M12	20	7
	370	**M16**	**Solid brick**	-	18	80	h_{ef} + e	62 - 290	16[1)]	M12	20	7
	370	**M16**	**Perforated brick**	FIS H 20x200 K	20	200	h_{ef} + e + 10 mm	62 - 170	16[1)]	M12	20	40
	370	**M16**	**Aerated concrete**	-	18	100	h_{ef} + e	62 - 270	16[1)]	M12	20	9

[1)] The setscrews may be replaced by a setscrew / fixing screw up to a length 200 mm.

Technical data

Injection mortar


FIS EM Plus 390 S


FIS Green 300 T


FIS SB 390 S


FIS V Plus 360 S

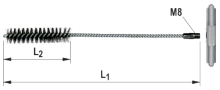

Multi MS

Item	Item no.	Approval ETA	DIBt	ICC	Languages on the cartridge	Contents	Sales unit [pcs]
FIS EM Plus 390 S	544154	●	●	●	EN, FR, NL	1 x Cartridge 390 ml, 2 x static mixer FIS MR Plus	1
FIS EM Plus 390 S	544155	●	●	●	AR, EN, ZH	1 x Cartridge 390 ml, 2 x static mixer FIS MR Plus	1
FIS Green 300 T	532972	●	–	–	DA, FI, NO, SV	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus with transparent clip	1
FIS Green 300 T	523245	●	–	–	IT	1 x Cartridge 300 ml, 2 x static mixer FIS MR Plus with transparent clip	1
FIS SB 390 S	519451	●	–	●	DE, FR, NL	1 x Cartridge 390 ml, 2 x static mixer FIS MR Plus	1
FIS SB 390 S	518831	●	–	●	EN, ES, PT	1 x Cartridge 390 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 360 S	558746	●	●	●	EN, ES, PT	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
FIS V Plus 360 S	558752	●	●	●	DE, FR, NL	1 x Cartridge 360 ml, 2 x static mixer FIS MR Plus	1
Multi MS white 290 ml	059389	–	–	–	DE, EN, FR	1 x Cartridge 290 ml	1
Multi MS Express black 290 ml	538488	–	–	–	ES, PT	1 x Cartridge 290 ml	1
Multi MS white 290 ml	558977	–	–	–	CS, SK	1 x Cartridge 290 ml	1
MS EXPRESS white 290 ml	535892	–	–	–	ES, PT		1
KD Ultra BI 290 ml	545169	–	–	–	IT	1 x cartridge 290 ml	1

Additional language variations of the product groups are available

Technical data

Brush BS



BS

Item	Item no.	Length L_1 [mm]	Length L_2 [mm]	Brush diameter [mm]	For drill diameter [mm]	Sales unit [pcs]
BS Ø14	078180	250	80	16	14	1
BS Ø16/18	078181	250	80	20	16 / 18	1
BS Ø20/22	052277	300	80	25	20 / 22	1

Technical data

Blow-out pump AB G

AB G

Item	Item no.		Sales unit [pcs]
Blow-out pump AB G	567792		1

Accessories

TherMax accessories

TherMax cutting blade

TherMax thread reducing pin

Item	Item no.	Contents	Sales unit [pcs]
TherMax cutting blade, 25 pcs	**547723**	25 x Cutting blades	1
TherMax thread reducing pin M12/M8 R	**569858**	10 x Thread reducing pin M12/M8 R (total length 59 mm; M12 29 mm, M8 30 mm) 10 x Washer 8,4 x 16 x 1,6 A4 10 x Hexagon nut M8 A4 SW13 1 x Installation instruction	10
TherMax thread reducing pin M12/M10 R	**553834**	10 x Thread reducing pin M12/M10 R (total length 59 mm; M12 29 mm, M10 30 mm) 10 x Washer 10,5 x 25 x 3 A4 10 x Hexagon nut M10 A4 SW17 1 x Installation instruction	10

Loads

Stand-off installation TherMax 12 and 16 with load-bearing anchor rod made of zinc-plated steel 8.8 and a displacement of 1 mm

The below load table is valid for short-term loading (e.g. wind load). If the sealing of the annular gap between TherMax and plaster is assured by fischer sealant and adhesive Multi MS, KD or DKM, the TherMax version with an anchor rod on base substrate side made of zinc-plated steel may be used.
Highest permissible loads[1)5)7)] of a TherMax within an anchor group[2)] in concrete with the injection mortars FIS V Plus or FIS SB and in masonry with the injection mortar FIS V Plus.

Type	Minimum effective anchorage depth h_{ef} [4)8)] [mm]	Permissible tensile load N_{perm} [3)] [kN]	Permissible shear load at e = 62 mm V_{perm} [3)] [kN]	Permissible shear load at e = 100 mm V_{perm} [3)] [kN]	Permissible shear load at e = 120 mm V_{perm} [3)] [kN]	Permissible shear load at e = 140 mm V_{perm} [3)] [kN]	Permissible shear load at e = 160 mm V_{perm} [3)] [kN]	Permissible shear load at e = 180 mm V_{perm} [3)] [kN]	Permissible shear load at e = 200 mm V_{perm} [3)] [kN]	Permissible shear load at e = 250 mm V_{perm} [3)] [kN]	Permissible shear load at e = 300 mm V_{perm} [3)] [kN]	Minimum member thickness h_{min} [mm]	Minimum spacing $s_{min\parallel}$ / $s_{min\perp}$ [9)] [mm]	Minimum edge distance c_{min} [mm]
Concrete, cracked and non-cracked, strength class ≥ C20/25														
TherMax 12[8)]	70	3.40[6)]	1.22	0.75	0.63	0.54	0.40	0.29	0.22	0.10	0.05	100	55	55
TherMax 16[8)]	80	3.40[6)]	1.59	0.99	0.82	0.70	0.62	0.55	0.46	0.22	0.10	116	65	65
Solid brick, Mz, EN 771-1; f_b ≥ 12 N/mm²; ρ ≥ 1.8 kg/dm³; LxWxH ≥ 240x115x71 mm, NF														
TherMax 12[8)]	200	2.71	0.85	0.75	0.63	0.54	0.36	0.29	0.22	0.10	0.05	240	80/80	60
TherMax 16[8)]	200	2.71	1.29	0.99	0.82	0.70	0.62	0.55	0.46	0.22	0.10	240	80/80	60
Solid sand-lime brick, KS, EN 771; f_b ≥ 20 N/mm²; ρ ≥ 2.0 kg/dm³; LxWxH ≥ 250x240x240 mm, 8DF														
TherMax 12[8)]	50	2.86	1.22	0.75	0.63	0.54	0.40	0.29	0.22	0.10	0.05	240	80/80	60
TherMax 16[8)]	50	2.14	1.59	0.99	0.82	0.70	0.62	0.55	0.46	0.22	0.10	240	80/80	60
Vertically perforated brick type B, HLz, EN 771-1; f_b ≥ 12 N/mm²; ρ ≥ 1.0 kg/dm³; LxWxH = 370x240x237 mm resp. 500x175x237 mm														
TherMax 12[4)]	110	1.14	0.57	0.57	0.57	0.54	0.40	0.29	0.22	0.10	0.05	175	100/100	100
TherMax 16[4)]	110	1.14	0.57	0.57	0.57	0.57	0.57	0.55	0.46	0.22	0.10	175	100/100	100
Perforated sand-lime brick, KSL, EN 771-2; f_b ≥ 12 N/mm²; ρ ≥ 1.4 kg/dm³; LxWxH = 240x175x113 mm, 3DF														
TherMax 12[4)]	85	1.00	1.22	0.75	0.63	0.54	0.40	0.29	0.22	0.10	0.05	175	100/115	80
TherMax 16[4)]	85	1.00	1.14	0.99	0.82	0.70	0.62	0.55	0.46	0.22	0.10	175	100/115	80
Hollow block made of light weight concrete, Hbl, EN 771-3; f_b ≥ 2 N/mm²; ρ ≥ 1.0 kg/dm³; LxWxH = 362x240x240 mm														
TherMax 12[4)]	110	0.43	0.26	0.26	0.26	0.26	0.26	0.26	0.22	0.10	0.05	240	100/240	60
TherMax 16[4)]	180	0.71	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.22	0.10	240	100/240	60
Aerated concrete (cylindrical drill hole), EN 771-4; f_b ≥ 2 N/mm²; ρ ≥ 0.35 kg/dm³; LxWxH ≥ 599x240x249 mm														
TherMax 12[8)]	200	1.43	0.43	0.43	0.43	0.43	0.40	0.29	0.22	0.10	0.05	240	80/80	100
TherMax 16[8)]	200	1.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.22	0.10	240	80/80	100

For the design the complete approval Z-21.8-1837 issued on 21.01.2022 as well as the European Technical Assessments ETA-20/0603, ETA-20/0729 or ETA-12/0258 have to be considered.

1) The required partial safety factors for material resistance as well as a partial safety factor for load actions of γ_L = 1.4 are considered.

2) Set-up of one or more TherMax in a row in direction of shear, for which the clamping of the attachment prevents a torsion on attachment side due to a sufficient stiffness of the attachment or connecting construction. For a clamping on base substrate side only, see approval.

3) For combinations of tensile and shear loads as well as reduced spacing or edge distances (anchor groups) see approval. The values for tensile loads in masonry are valid only, if the joints of the masonry is completely filled with masonry mortar. If the joints are not filled with masonry mortar are not filled with masonry mortar and the edge distance towards the joints is less than c_{min}, the loads have to be reduced by the factor a_l = 0.75. The values for shear loads are valid only, if the joints are filled with masonry mortar. For not completely filled joints they have to be handled like a free edge and a minimum edge distance c_{min} of the anchors to the joints has to be observed. For compression loads and perforated bricks or hollow blocks see approval. Calculative assumed thickness of the attachment t_{fix} = 6 mm.

4) In vertically perforated bricks HLz, perforated sand-lime bricks KSL as well as hollow blocks made of light weight concrete Hbl the TherMax 12 (standard version) can bridge non-load bearing layers up to 110 mm and the TherMax 16 can bridge them up to 170 mm. Larger usable lengths up to 300 mm are possible, if other perforated sleeves and where required longer anchor rods are used and again the anchorage depth gets reduced - see approval.

5) The stated permissible loads are valid for anchorages in dry base substrates - use category d/d - and for temperatures up to +50 °C (resp. short-term up to +80 °C) in the area of the injection mortar and during drill hole cleaning in accordance with the approval. The load values apply to anchor rods on base substrate side made of zinc-plated steel grade 8.8 - for other steel grades or stainless steel see approval.

6) Complies with the permissible tensile load of the TherMax cone.

7) Intermediate values of the shear load may be linearly interpolated in dependence of "e", if nothing else is mentioned in the approval.

8) In solid bricks Mz and solid sand-lime bricks KS the TherMax 12 (standard version) can bridge non-load bearing layers up to 190 mm (140 mm in aerated concrete) and the TherMax 16 can bridge them up to 300 mm (270 mm in aerated concrete) - but in solid brick Mz and aerated concrete the above load values have to be reduced. In concrete the TherMax 12 (standard version) can bridge non-loadbearing layers up to 170 mm and the TherMax 16 can bridge them up to 290 mm. Larger usable lengths up to 300 mm are possible, if longer anchor rods are used and again in solid bricks Mz if the anchorage depth (compared to above values) gets reduced where required - see approval.

9) Minimum spacing with simultaneous reduction of the permissible load for each TherMax.

Loads

Stand-off installation TherMax 12 and 16 with load-bearing anchor rod made of stainless steel R-70 and a displacement of 3 mm

The below load table is valid for short-term loading (e.g. wind load). Measures for sealing see approval, section 3.2.4.
Highest permissible loads[1)5)7)] of a TherMax within an anchor group[2)] in concrete with the injection mortars FIS V Plus or FIS SB and in masonry with the injection mortar FIS V Plus.

Type	Minimum effective anchorage depth h_{ef} [4)8)] [mm]	Permissible tensile load N_{perm} [3)] [kN]	Permissible shear load at e = 62 mm V_{perm} [3)] [kN]	Permissible shear load at e = 100 mm V_{perm} [3)] [kN]	Permissible shear load at e = 120 mm V_{perm} [3)] [kN]	Permissible shear load at e = 140 mm V_{perm} [3)] [kN]	Permissible shear load at e = 160 mm V_{perm} [3)] [kN]	Permissible shear load at e = 180 mm V_{perm} [3)] [kN]	Permissible shear load at e = 200 mm V_{perm} [3)] [kN]	Permissible shear load at e = 250 mm V_{perm} [3)] [kN]	Permissible shear load at e = 300 mm V_{perm} [3)] [kN]	Minimum member thickness h_{min} [mm]	Minimum spacing $s_{min\parallel}$ / $s_{min\perp}$ [9)] [mm]	Minimum edge distance c_{min} [mm]
Concrete, cracked and non-cracked, strength class ≥ C20/25														
TherMax 12[8)]	70	3.40[6)]	1.22	0.75	0.63	0.54	0.47	0.42	0.38	0.30	0.15	100	55	55
TherMax 16[8)]	80	3.40[6)]	1.59	0.99	0.82	0.70	0.62	0.55	0.49	0.39	0.31	116	65	65
Solid brick, Mz, EN 771-1; f_b ≥ 12 N/mm²; ρ ≥ 1.8 kg/dm³; LxWxH ≥ 240x115x71 mm, NF														
TherMax 12[8)]	200	2.71	0.85	0.75	0.63	0.54	0.47	0.42	0.38	0.30	0.15	240	80/80	60
TherMax 16[8)]	200	2.71	1.29	0.99	0.82	0.70	0.62	0.55	0.49	0.39	0.31	240	80/80	60
Solid sand-lime brick, KS, EN 771; f_b ≥ 20 N/mm²; ρ ≥ 2.0 kg/dm³; LxWxH ≥ 250x240x240 mm, 8DF														
TherMax 12[8)]	50	2.86	1.22	0.75	0.63	0.54	0.47	0.42	0.38	0.30	0.15	240	80/80	60
TherMax 16[8)]	50	2.14	1.59	0.99	0.82	0.70	0.62	0.55	0.49	0.39	0.31	240	80/80	60
Vertically perforated brick type B, HLz, EN 771-1; f_b ≥ 12 N/mm²; ρ ≥ 1.0 kg/dm³; LxWxH = 370x240x237 mm resp. 500x175x237 mm														
TherMax 12[4)]	110	1.14	0.57	0.57	0.57	0.54	0.47	0.42	0.38	0.30	0.15	175	100/100	100
TherMax 16[4)]	110	1.14	0.57	0.57	0.57	0.57	0.57	0.55	0.49	0.39	0.31	175	100/100	100
Perforated sand-lime brick, KSL, EN 771-2; f_b ≥ 12 N/mm²; ρ ≥ 1.4 kg/dm³; LxWxH = 240x175x113 mm, 3DF														
TherMax 12[4)]	85	1.00	1.22	0.75	0.63	0.54	0.47	0.42	0.38	0.30	0.15	175	100/115	80
TherMax 16[4)]	85	1.00	1.14	0.99	0.82	0.70	0.62	0.55	0.49	0.39	0.31	175	100/115	80
Hollow block made of light weight concrete, Hbl, EN 771-3; f_b ≥ 2 N/mm²; ρ ≥ 1.0 kg/dm³; LxWxH = 362x240x240 mm														
TherMax 12[4)]	110	0.43	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.15	240	100/240	60
TherMax 16[4)]	180	0.71	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	240	100/240	60
Aerated concrete (cylindrical drill hole), EN 771-4; f_b ≥ 2 N/mm²; ρ ≥ 0.35 kg/dm³; LxWxH ≥ 599x240x249 mm														
TherMax 12[8)]	200	1.43	0.43	0.43	0.43	0.43	0.43	0.42	0.38	0.30	0.15	240	80/80	100
TherMax 16[8)]	200	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.39	0.31	240	80/80	100

For the design the complete approval Z-21.8-1837 issued on 21.01.2022 as well as the European Technical Assessments ETA-20/0603, ETA-20/0729 or ETA-12/0258 have to be considered.

1) The required partial safety factors for material resistance as well as a partial safety factor for load actions of γ_L = 1.4 are considered.

2) Set-up of one or more TherMax in a row in direction of shear, for which the clamping of the attachment prevents a torsion on attachment side due to a sufficient stiffness of the attachment or connecting construction. For a clamping on base substrate side only, see approval.

3) For combinations of tensile and shear loads as well as reduced spacing or edge distances (anchor groups) see approval. The values for tensile loads in masonry are valid only, if the joints of the masonry is completely filled with masonry mortar. If the joints are not filled with masonry mortar are not filled with masonry mortar and the edge distance towards the joints is less than c_{min}, the loads have to be reduced by the factor a_j = 0.75. The values for shear loads are valid only, if the joints are filled with masonry mortar. For not completely filled joints they have to be handled like a free edge and a minimum edge distance c_{min} of the anchors to the joints has to be observed. For compression loads and perforated bricks or hollow blocks see approval. Calculative assumed thickness of the attachment t_{fix} = 6 mm.

4) In vertically perforated bricks HLz, perforated sand-lime bricks KSL as well as hollow blocks made of light weight concrete Hbl the TherMax 12 (standard version) can bridge non-load bearing layers up to 110 mm and the TherMax 16 can bridge them up to 170 mm. Larger usable lengths up to 300 mm are possible, if other perforated sleeves and where required longer anchor rods are used and again the anchorage depth gets reduced - see approval.

5) The stated permissible loads are valid for anchorages in dry base substrates - use category d/d - and for temperatures up to +50 °C (resp. short-term up to +80 °C) in the area of the injection mortar and during drill hole cleaning in accordance with the approval. The load values apply to anchor rods on base substrate side made of stainless steel of the grade A4-70.

6) Complies with the permissible tensile load of the TherMax cone.

7) Intermediate values of the shear load may be linearly interpolated in dependence of "e", if nothing else is mentioned in the approval.

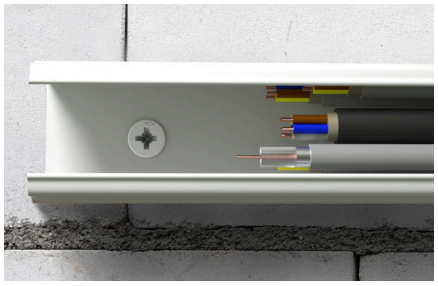
8) In solid bricks Mz and solid sand-lime bricks KS the TherMax 12 (standard version) can bridge non-load bearing layers up to 190 mm (140 mm in aerated concrete) and the TherMax 16 can bridge them up to 300 mm (270 mm in aerated concrete) - but in solid brick Mz and aerated concrete the above load values have to be reduced. In concrete the TherMax 12 (standard version) can bridge non-loadbearing layers up to 170 mm and the TherMax 16 can bridge them up to 290 mm. Larger usable lengths up to 300 mm are possible, if longer anchor rods are used and again in solid bricks Mz if the anchorage depth (compared to above values) gets reduced where required - see approval.

9) Minimum spacing with simultaneous reduction of the permissible load for each TherMax.

Hammerfix N

The hammer-in plug for a simple, fast and economical installation

Timber substructures



Cable ducts

Applications

- Substructures made of wood and metal
- Wall connection or plaster profiles
- Slides
- Sheets
- Cable and pipe clips
- Perforated tapes

Advantages

- The rapid hammerset installation reduces the amount of time required and allows for an economic series installation.
- The integrated hammer-in stop prevents the plug from expanding prematurely (jamming), thus enabling a problem-free installation.
- Together with the cross-slot recess, the thread of the nail screw allows the screw to be removed, thus allowing for subsequent dismantling.
- The wide range of diameters, usage lengths and head shapes provides the correct plug for every fixing.

Certificates / Features

★★★★★ Nylon Quality

Inox Stainless Steel

Building materials

- Concrete
- Solid sand-lime brick
- Building brick
- Natural stone
- Solid brick made from lightweight concrete
- Aerated concrete
- Solid panel made from gypsum

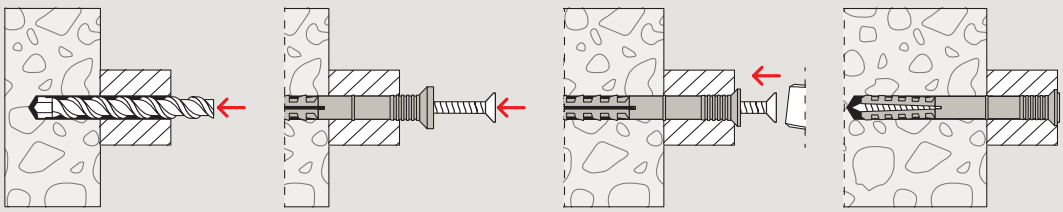
Versions

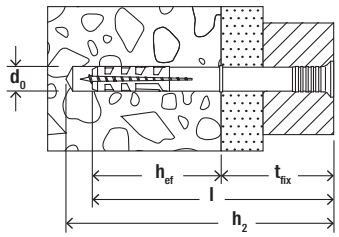
- Galvanised steel
- Stainless steel

Functioning

- The Hammerfix N is suitable for push-through installation.
- When hammered in, the nail screw causes the plug to expand in two directions, thus providing a secure anchoring in the building material.
- Countersunk head plugs are recommended for the installation of timber constructions; in the case of metal constructions, use plugs with cylindrical head, and use flat edge plugs for long holes.

Installation N





Technical data

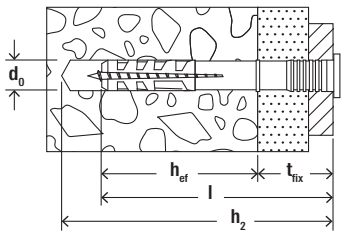
Hammerfix N-S

N-S N-S A2

6

Item	Galvanised steel Item no. gvz	Stainless steel A2 Item no. A2	Drill diameter d_0 [mm]	Effect. anchorage depth h_{ef} [mm]	Anchor length l [mm]	Min. drill hole depth for through fixings h_2 [mm]	Max. fixture thickness t_{fix} [mm]	Drive	Sales unit [pcs]
N 5 x 30/5 S (100)	050395[1]	050370	5	25	30	45	5	PZ2	100
N 5 x 40/15 S (100)	050351	–	5	25	40	55	15	PZ2	100
N 5 x 50/25 S (100)	050352	–	5	25	50	65	25	PZ2	100
N 6 x 40/10 S (50)	050354	050372	6	30	40	55	10	PZ2	50
N 6 x 40/10 S (100)	048788	–	6	30	40	55	10	PZ2	100
N 6 x 40/10 S (200)	513834[1]	–	6	30	40	55	10	PZ2	200
N 6 x 60/30 S (50)	050355	050373	6	30	60	75	30	PZ2	50
N 6 x 60/30 S (100)	048789	–	6	30	60	75	30	PZ2	100
N 6 x 60/30 S (200)	513835[1]	–	6	30	60	75	30	PZ2	200
N 6 x 80 /50 S (50)	050353	–	6	30	80	95	50	PZ2	50
N 6 x 80/50 S (100)	048790	–	6	30	80	95	50	PZ2	100
N 6 x 80/50 S (200)	513836[1]	–	6	30	80	95	50	PZ2	200
N 8 x 60/20 S (50)	050356	050374	8	40	60	75	20	PZ3	50
N 8 x 60/20 S (100)	048791	–	8	40	60	75	20	PZ3	100
N 8 x 80/40 S (50)	050358	050375	8	40	80	95	40	PZ3	50
N 8 x 80/40 S (100)	048792	–	8	40	80	95	40	PZ3	100
N 8 x 100/60 S (50)	050357	050376	8	40	100	115	60	PZ3	50
N 8 x 100/60 S (100)	048793	–	8	40	100	115	60	PZ3	100
N 8 x 120/80 S (50)	050359	–	8	40	120	135	80	PZ3	50
N 8 x 120/80 S (100)	048794	–	8	40	120	135	80	PZ3	100
N 10 x 100/50 S (50)	050346[2]	–	10	50	100	115	50	PZ3	50
N 10 x 135/85 S (50)	050347[2]	–	10	50	135	150	85	PZ3	50
N 10 x 160/110 S (50)	050348[2]	–	10	50	160	175	110	PZ3	50

[1] Also specially suitable for fischer pipe clips FC, see chapter electrical fixings.
[2] Not pre-assembled.



Technical data

Hammerfix N-F

N-F

Item	Item no.	Drill diameter d_0 [mm]	Effect. anchorage depth h_{ef} [mm]	Anchor length l [mm]	Min. drill hole depth for through fixings h_2 [mm]	Max. fixture thickness t_{fix} [mm]	Drive	Sales unit [pcs]
N 5 x 25/1 F (100)	**514872**	5	25	25	40	1	PZ2	100
N 5 x 25/1 F (200)	**514873**	5	25	25	40	1	PZ2	200
N 5 x 30/5 F (100)	**513736**	5	25	30	45	5	PZ2	100
N 5 x 30/5 F (200)	**513739**	5	25	30	45	5	PZ2	200
N 5 x 40/15 F (100)	**513737**	5	25	40	55	15	PZ2	100
N 5 x 40/15 F (200)	**513740**	5	25	40	55	15	PZ2	200
N 5 x 50/25 F (100)	**513738**	5	25	50	65	25	PZ2	100
N 5 x 50/25 F (200)	**513741**	5	25	50	65	25	PZ2	200
N 6 x 35/5 F (100)	**522948**	6	30	35	40	5	PZ2	100
N 6 x 40/10 F (100)	**513840**	6	30	40	55	10	PZ2	100
N 6 x 40/10 F (200)	**513843**	6	30	40	55	10	PZ2	200
N 6 x 60/30 F (100)	**513841**	6	30	60	75	30	PZ2	100
N 6 x 60/30 F (200)	**513844**	6	30	60	75	30	PZ2	200
N 6 x 80/50 F (100)	**513842**	6	30	80	95	50	PZ2	100
N 6 x 80/50 F (200)	**513845**	6	30	80	95	50	PZ2	200
N 8 x 60/20 F (100)	**513701**	8	40	60	75	20	PZ3	100
N 8 x 80/40 F (100)	**513702**	8	40	80	95	40	PZ3	100
N 8 x 100/60 F (100)	**513703**	8	40	100	115	60	PZ3	100
N 8 x 120/80 F (100)	**513704**	8	40	120	135	80	PZ3	100

Technical data

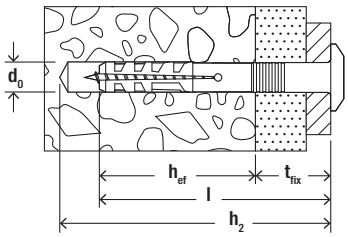
Hammerfix N-P K/-S M/-S D A2

N-P K

N-S M

N-S D A2

Item	Galvanised steel Item no. gvz	Stainless steel A2 Item no. A2	Drill diameter d_0 [mm]	Effect. anchorage depth h_{ef} [mm]	Anchor length l [mm]	Max. fixture thickness t_{fix} [mm]	Min. drill hole depth for through fixings h_2 [mm]	Diameter of washer [mm]	Drive	Sales unit [pcs]
N 6 x 40/7 P K (50)	**050342**	**–**	6	30	40	7	55	–	–	50
N 6 x 40/10 S M6 (50)	**050398**	**–**	6	30	40	10	55	–	–	50
N 6 x 40/10 S D A2 (50)	**–**	**050367**	6	30	40	10	55	19	PZ2	50
N 6 x 60/30 S D A2 (50)	**–**	**050368**	6	30	60	30	75	19	PZ2	50



Technical data

Hammerfix N-P

N-P N-P A2

6

	Galvanised steel	Stainless steel A2	Drill diameter	Effect. anchorage depth	Anchor length	Min. drill hole depth for through fixings	Max. fixture thickness	Drive	Sales unit
	Item no.	Item no.	d_0 [mm]	h_{ef} [mm]	l [mm]	h_2 [mm]	t_{fix} [mm]		[pcs]
Item	**gvz**	**A2**							
N 5 x 30/5 P (100)	**050338**	**095909**	5	25	30	45	5	PZ2	100
N 6 x 30/1 P (100)	**514869**	**–**	6	30	30	45	1	PZ2	100
N 6 x 40/7 P (50)	**050339**	**050369**	6	30	40	55	7	PZ2	50
N 6 x 40/7 P (100)	**048795**	**–**	6	30	40	55	7	PZ2	100
N 6 x 40/7 P (200)	**514871**	**–**	6	30	40	55	7	PZ2	200
N 8 x 40/1 P (50)	**015903**	**–**	8	40	40	55	1	PZ3	50
N 8 x 40/1 P (100)	**514870**	**–**	8	40	40	55	1	PZ3	100

Loads

Hammerfix N

Recommended loads[1] for a single anchor.
The given loads are valid for screw nails with the specified diameter.

Type			N 5	N 6[3]	N 8	N 10
Screw nail diameter		[mm]	3.5	3.7	4.7	7.0
Recommended loads in the respective base material F_{rec}[2]						
Concrete	≥ C20/25	[kN]	0.20	0.25	0.27	0.33
Solid brick	≥ Mz 12	[kN]	0.14	0.18	0.24	0.30
Solid sand-lime brick	≥ KS 12	[kN]	0.18	0.22	0.24	0.33
Solid brick of lightweight aggregate concrete	≥ V 4	[kN]	0.05	0.12	0.15	0.16
Aerated concrete	≥ AAC 2	[kN]	0.03	0.04	0.05	0.10
Aerated concrete	≥ AAC 4	[kN]	0.07	0.10	0.13	0.16

[1] Required safety factors are considered. Valid for installation and use in dry base material for temperatures in the substrate up to +24 °C (resp. short term up to +40 °C).
[2] Valid for tensile load, shear load and oblique load under any angle.
[3] The values have to be reduced by 50% for N 6 x 40/7 P K.

Spacer disk DAD

To correct unevennesses in the rail installation of ETICS rails, base rails and wall profiles.

Applications

- For use in combination with hammerfix and frame fixings with a drill hole diameter of 6, 8 or 10 mm

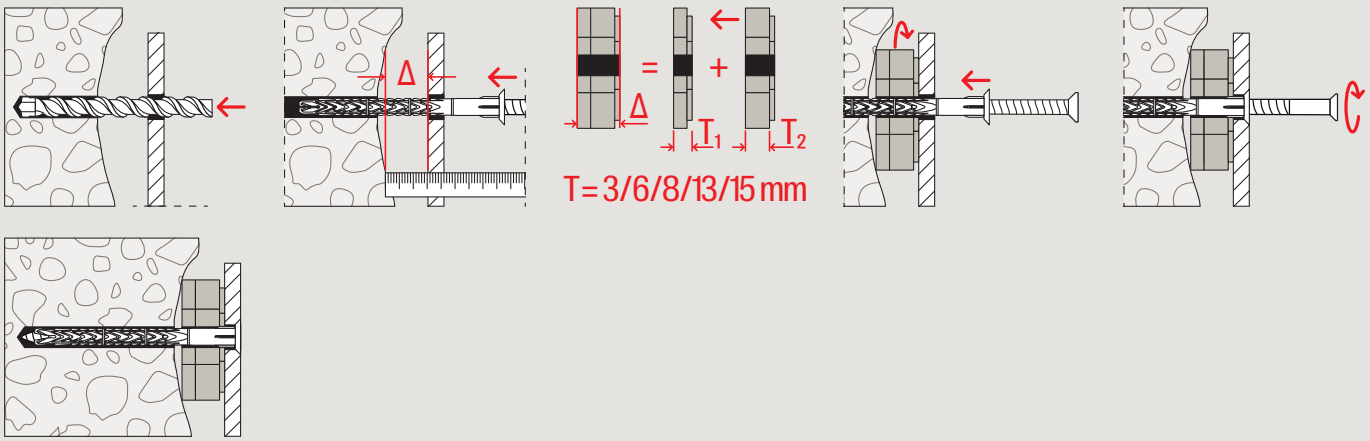
Advantages

- 3 seats for 6, 8 and 10mm frame fixings or hammerfix.
- Several DADs can be stacked together.
- More secure hold of the fixing as a result of the precisely fitting seat.
- Simple fixing.

Functioning

- When using DADs stacked on top of each other, 2mm has to be added because of the stacking equipment.
- The total thickness of the DAD element has to be added to the usable length of the plug.

Installation DAD



Technical data

Spacer disk DAD

DAD 1

DAD 4

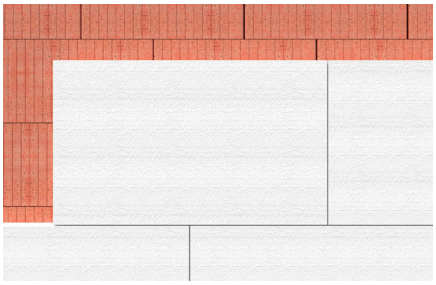
DAD 6

DAD 13

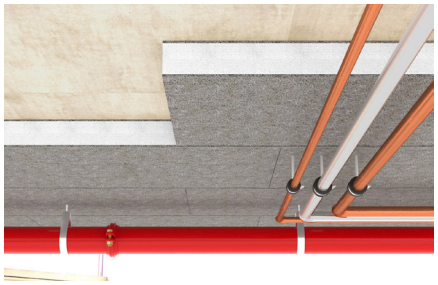
Item	Item no.	Diameter d [mm]	Thickness [mm]	Sales unit [pcs]
DAD 1	**008660**	50	3	100
DAD 4	**008661**	50	6	100
DAD 6	**008662**	50	8	100
DAD 13	**008663**	50	15	100

1c adhesive foam PUP ETICS 750

The adhesive one-component foam for ETIC systems with general technical approval



Wall insulation



Insulation of cellar ceiling

Applications

- Bonding of insulating boards in accordance with ETAG Guideline 004/2013
- Fixing of external wall insulation, internal wall insulation and attic insulation
- Fixing of basement ceiling insulation
- Bonding of perimeter insulation panels

Advantages

- The special recipe guarantees high adhesive tensile strength for secure fixing.
- The high foam yield allows for the bonding of up to 12 m² of wall space and is therefore especially economical.
- Really low post-expansion avoids the formation of cavities between the wall and insulation panel and guarantees a secure connection.
- The use of the can/gun system provides a time saving of approx. 30% and thus guarantees efficient work.
- The new non-sticking safety valve guarantees long-lasting functionality.

Building materials

- EPS- / XPS-insulation panels
- Concrete
- Thick Bitumen Coating
- Anodised layer
- Gypsum plasterboard
- Wood
- Thick bitumen coating
- Plastics (not on PE, PP, Teflon, silicone)
- Masonry
- Plaster
- Sand-lime brick
- Fibre cement
- Galvanized sheet metal
- Aerated concrete

Certificates / Features

- Building approval for bonding EPS boards in ETIC systems
- Adhesive tensile strength values (based on ETAG guideline 004/2013, section 5.1.4.1.2)
- French VOC-emission class A+
- EMICODE® EC 1 Plus - very low emission

Functioning

- 1-component PU foam
- Foam yield sufficient for up to 12 m² wall area
- Processing temperature environment: +5 °C to +25 °C (can temperature: +10 °C to +25 °C)
- Open Time approx. 10 minutes
- Can be cut within approx. 20 minutes
- Temperature resistant from -40 °C to +90 °C
- Extremely high heat insulation properties
- Shear resistance (EN 12090) 38,7 kPa
- Fresh foam stains can be removed immediately with fischer PU cleaner.
- When pressed on, an adhesive surface percentage of at least 40% must be achieved.
- Do not knock the insulation panels against the wall (this damages the foam structure).

Technical data

1c adhesive foam PUP ETICS 750

PUP WDVS 750 Premium

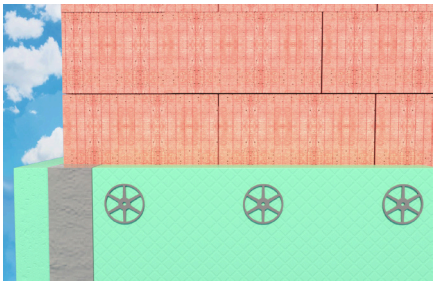
	Item no.	Approval DIBt	Languages on the cartridge	Contents [ml]	Max. foam yield [m²]	Colour	Content per box [pcs] [pcs.]	Sales unit [pcs]
Item								
PUP 750 ETICS	**543448**[1)]	●	EN	750	approx. 12	light green	12	1

[1)] Dangerous goods - no express shipping possible.

6

1c Premium gun foam PUP B1 750

The hardly flammable B1 one-component gun foam



Filling cavities in the insulation

Foaming steel door frames

Applications

- High-efficiency thermal insulation on façades
- Insulating and filling in roofing work
- Insulating and filling window connection joints, around window sills and shutter boxes
- Insulating and filling finished elements, wall connections, wall penetrations and cavities

Advantages

- The PUFS is hardly flammable in line with the B1 test and can therefore be used between solid, mineral or metal building materials. Thus it provides the highest level of safety.
- The new high-quality safety valve prevents adhesion when being stored horizontally or during long interruptions of work, thus guaranteeing long-lasting functionality.
- The easy dosage allows for a controlled filling and sealing, and ensures that the correct amount is used.

Building materials

Bonds to all standard building materials such as:

- Concrete
- Anodised layer
- Gypsum plasterboard
- Wood
- Sand-lime brick
- Plastics (not on PE, PP, Teflon, silicone)
- Masonry
- Metals
- Plaster
- Fiber cement
- Aerated concrete

Certificates / Features

- General test certificate from building authorities P-NDS04-620
- Proven joint soundproofing: of 10 and 20 mm joint width: Rs,w (C; Ctr) ≥ 63 (-2;-5) dB
- EMICODE® EC 1 Plus - very low emmission
- French VOC-emission class A+

Functioning

- 1-component PU foam
- Building material class B1
- Foam yield of extruded foam 45 l
- Processing temperature environment: +10 °C to +25 °C (can temperature: +10 °C to +25 °C)
- Non-tacky within approx. 10 minutes
- Can be cut within approx. 40 minutes
- Cures within 5 to 8 hours
- Temperature resistant from -40 °C to +90 °C
- Layer thicknesses > 50 mm: foam in several layers and then dampen.
- Fresh foam stains can be removed immediately with fischer PU cleaner.

Technical data

1c premium gun foam PUP B1 750

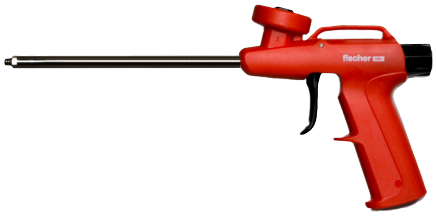
PUP B1 750 Premium

	Item no.	Languages on the cartridge	Contents [ml]	Max. foam yield (free foaming) [l]	Colour	Content per box [pcs] [pcs.]	Sales unit [pcs]
Item							
PUP B1 750	**045300**[1)]	DE, EN	750	45	concrete grey	12	1

[1)] Dangerous goods - no express shipping possible.

PU foam dispenser PUP K2 Plus

Easy and precisely dosed usage of fischer gun foams.



Advantages

- The light construction facilitates use on construction sites and allows for fatigue-free work.
- Back screw secured against unscrewing protects against loss and is therefore particularly user-friendly.
- The gun adapter is suitable for all standard systems and enables universal application.
- Opened cans can remain screwed onto the gun during interruptions of work without curing.

Technical data

Foam gun PUP K2 Plus

PUP K2 Plus

	Item no.	Type	Sales unit [pcs]
Item			
PUP K2	**062400**	platic gun	1

PU foam dispenser PUP M3

Metal foam gun for 1K gun foam.

Advantages

- The PUP M3 meets the tough requirements of a construction site and thus offers a long lifespan.
- The ergonomic handle allows for an ideal position of centre of gravity, and therefore precise handling.
- The infinitely variable control of the foam expulsion allows for a controlled filling and insulating, and enables application-orientated work. • Back screw secured against unscrewing protects against loss.
- Opened cans can remain screwed onto the gun during interruptions of work without curing.

Technical data

Metal foam gun PUP M3

PUP M3

	Item no.	Type	Sales unit [pcs]
Item			
PUP M3	**033208**	metal gun	1

PU foam dispenser PUP M4 BLACK

The foam gun with PTFE layering.

Advantages

- The complete PTFE coating reduces cleaning to a minimum.
- Non-return ball and basket are coated with PTFE. This prevents bonding and guarantees a long-lasting function.
- The perfect combination of the ergonomically shaped handle and trigger makes handling particularly user-friendly.
- The tubes included with the 19 cm long, tapered pistol pipe mean that it can be individually lengthened for use in the narrowest joints, thus offering a high degree of flexibility.

Technical data

Foam gun PUP M4 BLACK

PUP M4 black

	Item no.	Type	Sales unit [pcs]
Item			
PUP M4 BLACK	**513429**	metal gun	1

PU cleaner

The universal cleaner for fresh PU foam and the degreasing of non-absorbent surfaces

Advantages

- The active components ensure a high cleaning effect, making the cleaner ideal for the safe removal of fresh PU foam.
- The gun adapter is suitable for all standard systems and enables universal application.
- The separate spray head allows for the cleaning of external surfaces, making the product extremely versatile.
- The highly active cleaner can etch sensitive surfaces (paint, dye, textiles, plastics). Thus you should always conduct preliminary tests.

Functioning

- The active components ensure a high cleaning effect, making the cleaner ideal for the safe removal of fresh PU foam.
- The gun adapter is suitable for all standard systems and enables universal application.
- The separate spray head allows for the cleaning of external surfaces, making the product extremely versatile.
- The highly active cleaner can etch sensitive surfaces (paint, dye, textiles, plastics).
- Thus you should always conduct preliminary tests.

Technical data

Foam gun PUP M4 BLACK

PUR 150

PUR 500

Item	Item no.	Languages on the cartridge	Contents [ml]	Content per box [pcs] [pcs.]	Sales unit [pcs]
PUR 150	**053083**[1)]	DE	150	12	1
PUR 500	**053085**[1)]	DE, EN	500	12	1

[1)] Dangerous goods - no express shipping possible.

6

Flex MS

The permanently elastic sealant for expansion joints.

Sealing joints of façade panels

Exterior movement joints

Applications

- Joints in the façade area
- Movement and connection joints in interior and exterior areas
- Sealing of connection joints on wooden, plastic and metal windows and doors
- Connection joints inside the building between windows, doors, stairs, ceiling and wall
- Expansion joints between tiles on floors and walls
- Floor joints

Advantages

- The large movement absorption and the low E-module enable the safe absorption of large component movements in the joint.
- The suitability as façade and floor joint sealant according to EN 15651 part 1 and part 4 allows the application in interior and exterior areas.
- The 100% bubble-free curing guarantees a perfect joint appearance in all weather conditions.
- The good adhesion, even on damp substrates, allows the product to be applied outdoors regardless of the weather conditions.
- Compatibility with water-based paints and synthetic varnishes allows the sealant to be painted over.
- Very good weathering, aging and UV resistance for permanently safe application indoors and outdoors.

Building materials

- Concrete
- Masonry, Clinker
- Hard PVC
- Glass, glazed surfaces
- Copper, brass
- Wood and wood-based materials
- Plaster
- Brick
- Steel
- Zinc
- Eloxal
- Enamel, tiles, ceramic

Certificates / Features

- EN 15651-1:2012 F-EXT-INT-CC (25 LM)
- EN 15651-4:2012 PW-EXT-INT-CC (25 LM)
- EMICODE EC 1 Plus - very low emission
- French VOC emission class A+

Functioning

- Chemical base: 1K Hybrid MS-Polymer
- High elasticity of 25%
- Processing temperature: +5 °C to +40 °C
- Curing time 2 - 3 mm/24h
- Temperature resistance: -30 °C to +70 °C
- Shrinkage < 4%
- E-module at 100% elasticity 0.45 N/mm²
- Shore A 25
- Adheres even to damp substrates
- Can be painted over
- Solvent-, isocyanate- and silicone-free
- Very good weathering, aging and UV resistance

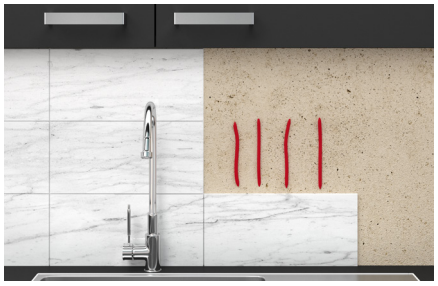
Technical data

Item	Item no.	Languages on the cartridge	Contents [ml]	Packaging	Colour	Content per box [pcs.]	Sales unit [pcs]
Flex MS white 290 ml	**558830**	DE, EN, FR	290	Cartridge	white	12	1
Flex MS grey 290 ml	**558831**	DE, EN, FR	290	Cartridge	grey	12	1

Hybrid Adhesive High Tack MS

The elastic adhesive with extremely high initial tack

Bonding of Insulation panels



Bonding of natural tiles

Applications

- Fixing of tiles and slabs, including natural stone
- Bonding of skirting boards, panels, cladding
- Fixing of mirrors
- Substructures made of wood and metal
- Insulation panels
- Outdoor fixings

Advantages

- The extremely high initial tack allows attachment of add-on parts without additional pre-fixing.
- The elasticity of the adhesive compensates component movements, vibrations and unevenness in the substrate.
- The high-quality raw materials allow use on sensitive substrates such as natural stone or mirror coatings.
- The position of bonded attachments can be corrected within the first 10 minutes.
- The High Tack MS can also be applied to damp substrates outdoors and allows for weather-independent application.
- On smooth and non-absorbent surfaces, the adhesive can be removed without leaving any residue.

Building materials

- Natural stone
- Metals
- Glass
- Enamel, tiles, ceramics
- Mirrors
- Hard PVC
- Wood and wood-based material
- Masonry, clinker
- Concrete
- Brick

Certificates / Features

- EMICODE EC 1 Plus - very low emission
- French VOC emission class A+

Functioning

- Chemical base: 1K Hybrid MS-Polymer
- Application temperature: +5 °C to +40 °C
- Extremely high initial adhesive strength of approx. 500 kg/m²
- Curing time 2 to 3 mm/24h
- Stress-equalizing
- Temperature resistance: -40 °C to +90 °C
- Solvent-, isocyanate- and silicone-free
- Waterproof and seawater resistant

Technical data

Item	Item no.	Languages on the cartridge	Contents [ml]	Packaging	Colour	Content per box [pcs] [pcs.]	Sales unit [pcs]
High Tack MS white 290 ml	**541712**	DE, EN, FR	290	–	white	12	1
High Tack MS white 290 ml	**558980**	CS, SK	290	–	white	12	1
Ultra MS Express white 290 ml	**559068**	EN, ES	290	–	white	12	1
KD Ultra BI 290 ml	**545169**	IT	290	–	white	12	1
V-Nozzle Express Cement	**524315**	–	–	Polybag	–	5	1

Dispenser KPM 3

The high-quality application gun for silicone cartridges.

Applications

- For low to high viscosity sealants and adhesives.
- For one-component plastic and aluminum cartridges up to 310 ml.

Advantages

- The 18:1 transmission ratio makes extrusion rapid and energy-efficient even in the case of highly viscous materials, thus guaranteeing stressfree work.
- The robust design of the drive block and the push rod meets the tough requirements of a construction site and thus offers a long lifespan.
- Due to the freely rotatable cartridge shell and the accessible cartridge, it is possible to align the extrusion nozzle perfectly in place and guarantee application-orientated work.
- The equipment with a ladder hook facilitates the retraction of the push rod and offers a convenient possibility of depositing during work interruptions.

Technical data

Dispenser KPM 3

KPM 3

	Item no.	Adapted for	Sales unit [pcs]
Item			
KPM 3	**541441**	Cartridges with 150 ml, 300 ml, 360 ml and 390 ml content	1

Dispenser KPM 2 Plus

The robust dispenser for cartridges with up to 310 ml volume.

Applications

- For squeezing out 1-component sealant and adhesive cartridges up to 310 ml content
- For squeezing out fischer injection mortars up to 300 ml content

Advantages

- The dispenser can be used for all common 1-component sealant and adhesive cartridges up to 310 ml as well as fischer injection mortars up to 300 ml content.
- The 18:1 transmission ratio enables rapid and gentle squeezing of even highly viscous compounds for maximum application comfort.
- The robust housing with specially hardened push block guarantees reliable and long-lasting processing under demanding construction site conditions.
- The freely accessible and rotatable cartridge insert allows the cartridge to be optimally aligned and reaches even hard-to-reach places.
- The adjustable overrun stop prevents dripping, especially of low-viscosity compounds.
- The push rod that is rounded at the back makes it easy to pull back and also convenient to hang the device.

Functioning

- Metal housing with robust paint finish and corrosion-resistant sliding elements.
- Front groove width for inserting the cartridge approx. 26 mm.
- Diameter of the slide plate of 41.5 mm ± 0.1 mm.
- Compressive strength of 6,000 N.
- Weight approx. 770 g.

Technical data

Dispenser KPM2 plus

KPM 2 Plus

Item	Item no.	Adapted for	Sales unit [pcs]
KPM 2 Plus	**053117**	Cartridges with 150 ml, 300 ml, 360 ml and 390 ml content	1

Hammer drill bit Quattric II S / Quattric II

The expert for the best performance in reinforced concrete

Drilling in concrete wall

Drilling in floor plate

Applications

To create approval-compliant drill holes in:

- Reinforced concrete
- Concrete
- Solid brick
- Sand-lime brick

Also suitable for:

- Natural stone

Advantages

- Robust solid carbide head (up to ø 20 mm) for a long service life.
- Massive main cutting edges in combination with the improved break-up performance of the Power Shoulders enable fast drilling progress.
- Integrated reinforcement chamfers prevent jamming in reinforcement.
- Special spiral geometry combines quick drilling progress and increased service life.
- Centering tip for a simple and accurate spot drilling, prevents running on smooth surfaces.
- Wear mark for easy recognition of the wear limit according to PGM.

Certificates / Features

PGM®

SDS Plus

Functioning

- Four-cutter hammer drill bit with SDS Plus shank enables higher durability in reinforced concrete.

Technical data

Hammer drill bit Quattric II S / Quattric II

Quattric II S / Quattric II

Item	Item no.	Drill diameter d_0 [mm]	Working length [mm]	Total length l [mm]	Packaging	Contents [pcs.]	Sales unit [pcs]
Quattric II 5/50/115 S	549973	5	50	115	Plastic clip	1	1
Quattric II 5/100/165 S	549974	5	100	165	Plastic clip	1	1
Quattric II 5.5/50/115 S	549971	5.5	50	115	Plastic clip	1	1
Quattric II 5.5/100/165 S	549972	5.5	100	165	Plastic clip	1	1
Quattric II 5/150/215 S	544214	5	150	215	Plastic clip	1	1
Quattric II 6/50/115 S	549983	6	50	115	Plastic clip	1	1
Quattric II 6/50/115 S XP5	549984	6	50	115	Plastic tube	5	1
Quattric II 6/100/165 S	549979	6	100	165	Plastic clip	1	1
Quattric II 6/100/165 S XP5	544225	6	100	165	Plastic tube	5	1
Quattric II 6/100/165 S XP10	549980	6	100	165	Plastic tube	10	1
Quattric II 6/150/215 S	549981	6	150	215	Plastic clip	1	1
Quattric II 6/150/215 S XP5	549982	6	150	215	Plastic tube	5	1
Quattric II 6/150/215 S XP10	544185	6	150	215	Plastic tube	10	1
Quattric II 6/200/265 S	549985	6	200	265	Plastic clip	1	1
Quattric II 6/200/265 S XP5	552131	6	200	265	Plastic tube	5	1
Quattric II 6/250/315 S	549986	6	250	315	Plastic clip	1	1
Quattric II 6.5/100/165 S	549975	6.5	100	165	Plastic clip	1	1
Quattric II 6.5/100/165 S XP5	544217	6.5	100	165	Plastic tube	5	1
Quattric II 6.5/150/215 S	549976	6.5	150	215	Plastic clip	1	1
Quattric II 6.5/200/265 S	549977	6.5	200	265	Plastic clip	1	1
Quattric II 6.5/250/315 S	549978	6.5	250	315	Plastic clip	1	1
Quattric II 7/100/165 S	549987	7	100	165	Plastic clip	1	1
Quattric II 8/50/115 S	549993	8	50	115	Plastic clip	1	1
Quattric II 8/100/165 S	549988	8	100	165	Plastic clip	1	1
Quattric II 8/100/165 S XP5	549989	8	100	165	Plastic tube	5	1
Quattric II 8/100/165 S XP10	544216	8	100	165	Plastic tube	10	1
Quattric II 8/150/215 S	549990	8	150	215	Plastic clip	1	1
Quattric II 8/150/21 S XP5	549991	8	150	215	Plastic tube	5	1
Quattric II 8/150/215 S XP10	544186	8	150	215	Plastic tube	10	1
Quattric II 8/200/265 S	549994	8	200	265	Plastic clip	1	1
Quattric II 8/200/265 S XP5	552132	8	200	265	Plastic tube	5	1
Quattric II 8/250/315 S	549992	8	250	315	Plastic clip	1	1
Quattric II 8/300/365 S	549995	8	300	365	Plastic clip	1	1
Quattric II 8/400/465 S	549996	8	400	465	Plastic clip	1	1
Quattric II 10/50/115 S	549928	10	50	115	Plastic clip	1	1
Quattric II 10/100/165 S	549922	10	100	165	Plastic clip	1	1
Quattric II 10/100/165 S XP5	549924	10	100	165	Plastic tube	5	1
Quattric II 10/100/165 S XP10	549923	10	100	165	Plastic tube	10	1
Quattric II 10/150/215 S	549925	10	150	215	Plastic clip	1	1
Quattric II 10/150/215 S XP5	549926	10	150	215	Plastic tube	5	1
Quattric II 10/150/215 S XP10	544187	10	150	215	Plastic tube	10	1
Quattric II 10/200/265 S	549929	10	200	265	Plastic clip	1	1
Quattric II 10/200/265 S XP5	552133	10	200	265	Plastic tube	5	1
Quattric II 10/250/315 S	549927	10	250	315	Plastic clip	1	1
Quattric II 10/300/365 S	544224	10	300	365	Plastic clip	1	1
Quattric II 10/390/455 S	549930	10	390	455	Plastic clip	1	1
Quattric II 10/540/600 S	544222	10	540	600	Plastic clip	1	1
Quattric II 12/110/165 S	549932	12	110	165	Plastic clip	1	1
Quattric II 12/110/165 S XP5	549933	12	110	165	Plastic tube	5	1
Quattric II 12/110/165 S XP10	552129	12	110	165	Plastic tube	10	1
Quattric II 12/160/215 S	549936	12	160	215	Plastic clip	1	1
Quattric II 12/160/215 S XP5	549937	12	160	215	Plastic tube	5	1
Quattric II 12/160/215 S XP10	544188	12	160	215	Plastic tube	10	1
Quattric II 12/210/265 S	549934	12	210	265	Plastic clip	1	1
Quattric II 12/210/265 S XP5	549938	12	210	265	Plastic tube	5	1
Quattric II 12/210/265 S XP10	552130	12	210	265	Plastic tube	10	1

Technical data

Hammer drill bit Quattric II S / Quattric II

Quattric II S / Quattric II

Item	Item no.	Drill diameter d_0 [mm]	Working length [mm]	Total length l [mm]	Packaging	Contents [pcs.]	Sales unit [pcs]
Quattric II 12/260/315 S	**549939**	12	260	315	Plastic clip	1	1
Quattric II 12/400/455 S	**549935**	12	400	455	Plastic clip	1	1
Quattric II 12/550/600 S	**544213**	12	550	600	Plastic clip	1	1
Quattric II 12/950/1000 S	**549931**	12	950	1,000	Plastic clip	1	1
Quattric II 14/110/165 S	**549941**	14	110	165	Plastic clip	1	1
Quattric II 14/110/165 S XP5	**544220**	14	110	165	Plastic tube	5	1
Quattric II 14/160/215 S	**549944**	14	160	215	Plastic clip	1	1
Quattric II 14/160/215 S XP5	**544221**	14	160	215	Plastic tube	5	1
Quattric II 14/160/215 S XP10	**544189**	14	160	215	Plastic tube	10	1
Quattric II 14/210/265 S	**549942**	14	210	265	Plastic clip	1	1
Quattric II 14/260/315 S	**549945**	14	260	315	Plastic clip	1	1
Quattric II 14/400/455 S	**549943**	14	400	455	Plastic clip	1	1
Quattric II 14/550/600 S	**544223**	14	550	600	Plastic clip	1	1
Quattric II 14/950/1000 S	**549940**	14	950	1,000	Plastic clip	1	1
Quattric II 15/110/165 S	**549946**	15	110	165	Plastic clip	1	1
Quattric II 15/160/215 S	**549947**	15	160	215	Plastic clip	1	1
Quattric II 15/210/265 S	**544215**	15	210	265	Plastic clip	1	1
Quattric II 16/110/165 S	**549950**	16	110	165	Plastic clip	1	1
Quattric II 16/160/215 S	**549951**	16	160	215	Plastic clip	1	1
Quattric II 16/210/265 S	**549952**	16	210	265	Plastic clip	1	1
Quattric II 16/260/315 S	**549953**	16	260	315	Plastic clip	1	1
Quattric II 16/400/455 S	**549954**	16	400	455	Plastic clip	1	1
Quattric II 16/550/600 S	**549955**	16	550	600	Plastic clip	1	1
Quattric II 16/950/1000 S	**549948**	16	950	1,000	Plastic clip	1	1
Quattric II 18/200/250 S	**549956**	18	200	250	Plastic tube	1	1
Quattric II 18/400/450 S	**549957**	18	400	450	Plastic tube	1	1
Quattric II 20/200/250 S	**549958**	20	200	250	Plastic tube	1	1
Quattric II 20/400/450 S	**549959**	20	400	450	Plastic tube	1	1
Quattric II 22/200/250	**549960**	22	200	250	Plastic tube	1	1
Quattric II 22/400/450	**549961**	22	400	450	Plastic tube	1	1
Quattric II 24/200/250	**549962**	24	200	250	Plastic tube	1	1
Quattric II 24/400/450	**549963**	24	400	450	Plastic tube	1	1
Quattric II 25/200/250	**549964**	25	200	250	Plastic tube	1	1
Quattric II 25/400/450	**549965**	25	400	450	Plastic tube	1	1
Quattric II 28/200/250	**549966**	28	200	250	Plastic tube	1	1
Quattric II 28/400/450	**549967**	28	400	450	Plastic tube	1	1
Quattric II 30/200/250	**549968**	30	200	250	Plastic tube	1	1
Quattric II 30/400/450	**549969**	30	400	450	Plastic tube	1	1
Quattric II 32/400/450	**549970**	32	400	450	Plastic tube	1	1

Technical data

Hammer drill bit Quattric II S / Quattric II

Quattric II S Set

Item	Item no.	Packaging	Contents	Sales unit [pcs]
Quattric II S Set 5-12 mm (7)	**553210**	Assortment box	7 pcs: 5/50/115, 6/50/115, 6/100/165, 8/50/115, 8/100/165, 10/100/165, 12/110/165	1

Technical data

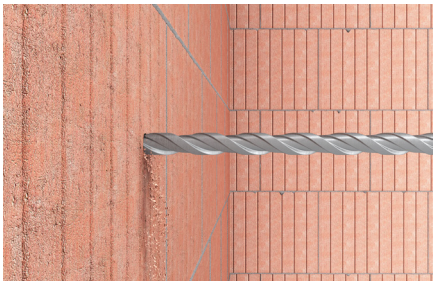
Hammer drill bit Quattric II inch

Quattric II

Item	Item no.	Drill diameter d_0 [in]	Working length [in]	Total length l [in]	Packaging	Contents [pcs.]	Sales unit [pcs]
Quattric II 1/2 x 6 1/4	**510585**	1/2	4	6 1/4	Plastic clip	1	1
Quattric II 1/2 x 12 1/4	**510586**	1/2	10	12 1/4	Plastic clip	1	1
Quattric II 1/4 x 6 1/4	**510572**	1/4	4	6 1/4	Plastic clip	1	1
Quattric II 3/8 x 6 1/4	**510579**	3/8	4	6 1/4	Plastic clip	1	1
Quattric II 3/8 x 12 1/4	**510580**	3/8	10	12 1/4	Plastic clip	1	1
Quattric II 5/16 x 6 1/4	**510576**	5/16	4	6 1/4	Plastic clip	1	1
Quattric II 7/16 x 12 1/4	**510583**	7/16	10	12 1/4	Plastic clip	1	1

Masonry drill bit Pointer U

The specialist for masonry with SDS Plus shank



Drilling in perforated brick

Drilling in material combinations

Applications

- Particularly suitable for drilling into vertically perforated brick without cracking
- Ideal for drilling in material combinations

Advantages

- Robust and diamond sharpened carbide tip ensures precise and fast drilling progress in different materials.
- The shortened SDS Plus shank reduces the impact force on the drill bit and thus avoids fractures in building material webs for best load-bearing capacity in all types of vertically perforated bricks.
- A large-volume drill flute guarantees fast removal of the drill dust.
- Universal use in different materials saves time and costs.
- PGM certification guarantees precise hold of fixings in the drill hole.

Certificates / Features

PGM®

SDS Plus Short

Building materials

To create drill holes in:

- Concrete
- Hollow bricks
- Aerated concrete
- Perforated sand-lime bricks
- Tiles
- Wood
- Metal sheets

Ideal for the following anchoring of:

- Frame or ETICS fixings, e.g. SXRL, FIS HK, fischer TherMax as well as VBS-M

Functioning

- Shortened SDS Plus shank reduces the impact force of the machine on the drill bit and prevents damage to the substrate.
- Drilling without impact is recommended.

Versions

- Shortened SDS Plus shank

Technical data

Masonry drill bit Pointer U

Pointer U

Item	Item no.	Drill diameter d_0 [mm]	Working length [mm]	Total length l [mm]	Packaging	Contents [pcs.]	Sales unit [pcs]
Pointer U 6/200/260	**568179**	6	200	260	Plastic clip	1	1
Pointer U 8/50/110	**568180**	8	50	110	Plastic clip	1	1
Pointer U 8/100/160	**568181**	8	100	160	Plastic clip	1	1
Pointer U 8/150/210	**568182**	8	150	210	Plastic clip	1	1
Pointer U 8/200/260	**568183**	8	200	260	Plastic clip	1	1
Pointer U 8/400/450	**568184**	8	400	450	Plastic clip	1	1
Pointer U 10/100/160	**568185**	10	100	160	Plastic clip	1	1
Pointer U 10/150/210	**568186**	10	150	210	Plastic clip	1	1
Pointer U 10/200/260	**568187**	10	200	260	Plastic clip	1	1
Pointer U 12/100/160	**568188**	12	100	160	Plastic clip	1	1
Pointer U 12/150/210	**568189**	12	150	210	Plastic clip	1	1
Pointer U 12/200/260	**568190**	12	200	260	Plastic clip	1	1
Pointer U 14/200/260	**568191**	14	200	260	Plastic clip	1	1
Pointer U 16/200/260	**568192**	16	200	260	Plastic clip	1	1
Pointer U 16/400/450	**568193**	16	400	450	Plastic clip	1	1
Pointer U 18/400/450	**568194**	18	400	450	Plastic clip	1	1
Pointer U 20/400/450	**568195**	20	400	450	Plastic clip	1	1

7
Basics - good to know.

Intensive support. fischer advises on your construction site.

fischer field specialists

- We support our customers on site at the construction site. We advise and help to fasten everything professionally. Tensile tests and fastening tests on site provide additional safety.
- Target-oriented not only in terms of safety: Together with our customers, we work out fastening solutions on site that are effective and economical. The installation procedures are optimised taking into account the general progress of the construction site.
- The training offered for customers and their employees provides targeted support for daily applications and imparts specialised knowledge.

fischer specialists on the technical hotline

- The same applies on the phone: the engineers and technicians who answer the questions have many years of practical experience and know how to correctly assess the trade-specific requirements.
- We are reliable contacts for our customers on the phone when it comes to building materials, loads, anchor dimensions, anchoring topics, approvals or the design of connecting parts.
- Major projects require fastening know-how to a particularly high degree. On request, one of the fischer experts can become a permanent part of the construction site management team.

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- We support planners and structural engineers to effectively save time and costs which has an impact on all phases of construction.
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If no detailed performance specifications are given for certain articles and types, please contact our Technical Service Department for advice.

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