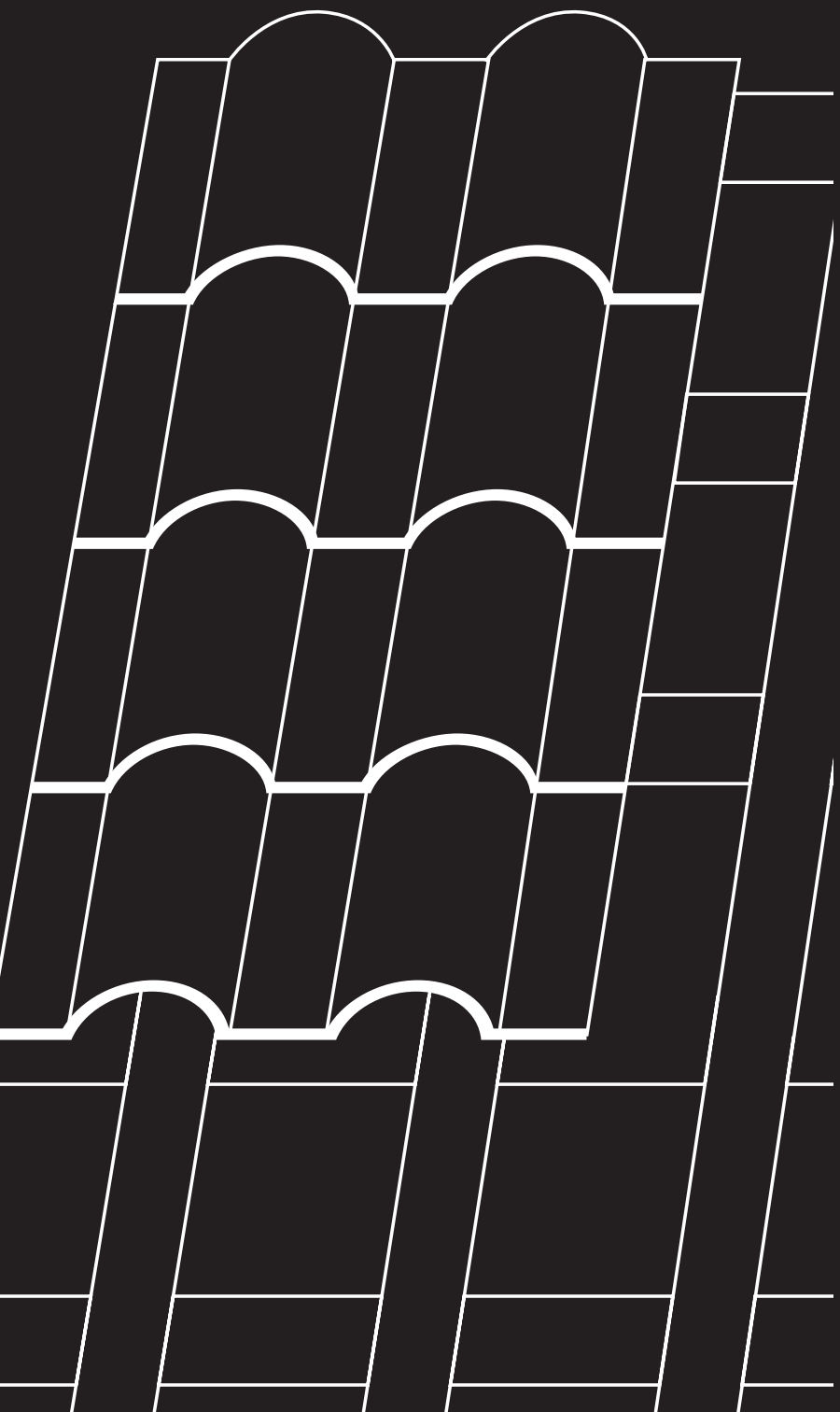
Eurotec®

The specialist for fastening technology

FASTENING SOLUTIONS
ROOF



ROOFING MEMBRANES

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ROOFING ACCESSORIES

www.eurotec.team/en

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ROOFING MEMBRANES

ROOF LINING/SARKING MEMBRANE

Effective protection against moisture, wind and dust ingress from the outside

A **MUST** FOR
EVERY **ROOF**

The roof surface provides a considerable part of the building's protection from the weather and is a core component of any energy-efficient building.

Nowadays, in order to guarantee durable and energy efficient roof structures, all components within the roof structure must meet strict constructional requirements.

FUNCTIONAL LAYERS OF A ROOF STRUCTURE

Vapour barriers and roof lining or sarking membranes are **important functional layers of any roof structure.** These components are part of our product portfolio and provide you with a **reliable solution for your roof.** The components we offer for each system are designed to work together and meet all the requirements of modern roof structures.

ZVDH – THE CENTRAL ASSOCIATION OF THE GERMAN ROOFING TRADE

ZVDH stands for the Central Association of the German Roofing Trade.
The guidelines and standards set by this association form the technical rules of the roofing trade. Their purpose is to ensure the quality and safety of the roofing work. These technical rules cover various aspects of the roofing trade, such as the material requirements, execution standards, safety and quality standards.

To ensure that the work performed by roofers meets the industry-specific requirements, it is important that you follow these rules.
The technical rules may vary between the federal states and regions; as they are often set at a national or regional level. If you are looking for specific information regarding the technical rules of the roofing trade, it might be helpful to contact the Central Association of the German Roofing Trade directly for the latest regulations.

Materialgarantie hinterlegt beim ZVDH

QUALITY ASSURANCE AND CERTIFICATIONS

Our top priority is to offer our customers impeccable products and services whilst guaranteeing 100% on-time deliveries. We expect each and every one of our employees to be fully committed to quality. Hence, we always put the training and further development of customer- and quality-oriented thinking and actions first and foremost. We are committed to compliance with the legal and regulatory requirements within an economic framework and the promotion of environmentally conscious behaviours.

As a result, we are proud that almost all of our products in the wood, façade and concrete segment come with ETA certification.
It goes without saying that our quality assurance department performs daily checks on the produced batches to guarantee our standards, i.e. the products' conformity with the drawings, functionality, appearance as well as compliance with customer specifications.

This is the only way we can be sure that we are providing our customers with the consistently high quality they have come to expect from us.

ROOF LINING/SARKING MEMBRANE TOP 150

Effective protection against moisture, wind and dust ingress from the outside

The roof lining/sarking membrane Top 150 is a **3-layer, highly vapour-permeable roof lining membrane** and suitable for insulated, ventilated and un-ventilated pitched roofs, including those with formwork, even if they are fully exposed to water, e.g. in the form of precipitation and, if the joints are closed, also as a façade membrane. It is characterised by an **increased tensile strength**, which greatly increases the working comfort. During the installation, there is no need for a ventilation slot between the membrane and the thermal insulation (mineral wool, glass fibre) – the product **can be installed directly on top of the thermal insulation.** The roof lining/sarking membrane Top 150 is suitable for use with almost all types of roof coverings – it is recommended for metal and aluminium roofs as well as for concrete and clay tiles.

Roof lining/sarking membrane Top 150

Item number	Designation	Dimensions	PU
954224	Top 150	145 g/m²; 1.5 m x 50 m	1

ADVANTAGES

- Filed with the ZVDH in the product data sheet under USB-A/UDB-A
- High tensile strength
- UV resistance
- Water resistance > 3000 mm H_2O
- 4 weeks of outdoor weathering as a temporary cover
- Suitable as a sarking and roof lining membrane
- With two self-adhesive tapes

Materialgarantie hinterlegt beim ZVDH

NOTE

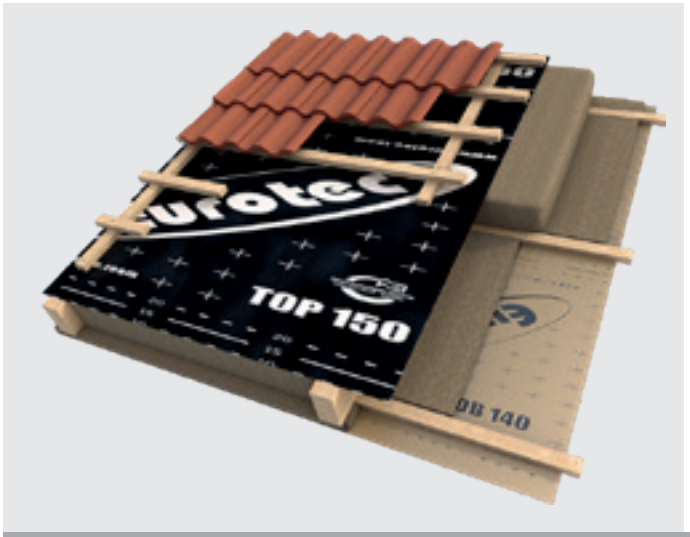
The final roof covering must be installed with battens and counter battens.

To match*

Our Uni Tape

(More about this on p. 41)

*Not included in the scope of delivery.



Exemplary roof structure with the installed Eurotec roof lining/sarking membrane Top 150.

MAIN FEATURES

Surface-related mass	approx. 150g/m²	Water vapour permeability	3000 g/m²/24h
SD value	approx. 0.02 m	UV resistance	4 months*
Water permeability	W1	Roll size	75 m² (1.5 m x 50 m)
Pallet	50 rolls	UV exposure time	4 weeks

*Based on the artificial ageing tested in the laboratory, the UV stabilisation lasts up to 4 months, in terms of an average sun exposure typical for the Central European climate.

TECHNICAL INFORMATION

Essential features	Harmonised technical specification	Values	Class/values
Fire performance	EN 13501-1	E	Klasa
Watertightness	EN 1928	W1	Klasa
Tear strength longitudinal	EN 12311-1 EN 13859-1	300 N/50 mm (+/- 40 N/50 mm)	MDV
Tear strength transverse	EN 12311-1 EN 13859-1	220 N/50 mm (+/- 20 N/50 mm)	MDV
Elongation longitudinal	EN 12311-1 EN 13859-1	35%–70%	MDV
Elongation transverse	EN 12311-1 EN 13859-1	50%–90%	MDV
Tear propagation longitudinal	EN 12310-1 EN 13859-1/ B	175 N (+/-30N)	MDV
Tear propagation transverse	EN 12310-1 EN 13859-1/ B	150 N (+/-30 N)	MDV
Low-temperature flexibility	EN 1109	at -40°C conforming	MLV
Artificial ageing in terms of:	**Annexe C EN 13859-1**		
Watertightness	EN 1928	W1	Class
Tear strength longitudinal	EN 12311-1 EN 13859-1	280 N (+/-50 N)	MLV
Tear strength transverse	EN 12311-1 EN 13859-1	185 N (+/-40 N)	MLV
Elongation longitudinal	EN 12311-1 EN 13859-1	30%–60%	MDV
Elongation transverse	EN 12311-1 EN 13859-1	40%–80%	MDV
Length	EN 1848-2	50 m (-0%)	MLV
Width	EN 1848-2	1.5 m (-0.5%) or 3.0 (-0.5%)	MLV
Mass per unit area	EN 1848-2	145 g/m² (+/-10 gm²)	MDV
Straightness	EN 1848-2	Conforming	MDV
Water vapour permeability	EN 12572/C	Sd = 0.025 m (-0.01/+0.035)	MDV

INSTRUCTIONS FOR USE

For use as an underlay for insulated and ventilated pitched roofs, here also for roofs with board cladding. Very well suited for roof renovations and loft renovations in "inverted roof systems". If the roof covering is unventilated, the roof lining membrane is used in direct contact with the thermal insulation (mineral wool, glass wool, etc.), which has the advantage that the roof lining membrane can be installed directly on top of the thermal insulation. The roof covering is attached to the roof lining membrane using roof battens and counter battens. Suitable for almost all roof systems – especially under roofing tiles, stones, pantile profiles, aluminium sheets, etc.

ROOF LINING/SARKING MEMBRANE TOP 180

Effective protection against moisture, wind and dust ingress from the outside

The roof lining/sarking membrane Top 180 is a **3-layer, highly vapour-permeable roof lining membrane** and suitable for insulated, ventilated and unventilated steep roofs and, if the joints are closed, also as a façade membrane. It has the **highest tensile strength** in its class and is suitable for roof coverings with concrete, ceramic and metal roof tiles as well as for roof coverings using metal sheets and natural slate. During the installation, there is no need for a ventilation slot between the membrane and the thermal insulation (mineral wool, glass fibre) – the product can be installed directly on top of the thermal insulation.

Roof lining/sarking membrane Top 180

Item number	Designation	Dimensions	PU
954225	Top 180	180 g/m²; 1.5 m x 50 m	1

ADVANTAGES

- Filed with the ZVDH in the product data sheet under USB-A/UDB-A
- Tensile strength
- Water resistance > 3000 mm H_2O
- High vapour permeability
- 4 weeks of outdoor weathering as a temporary cover
- Suitable as a sarking and roof lining membrane
- With two self-adhesive tapes

Materialgarantie hinterlegt beim ZVDH

NOTE

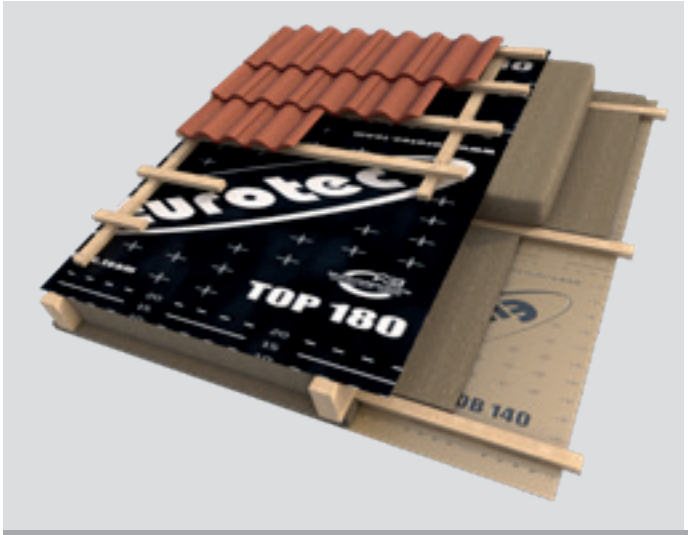
The final roof covering must be installed with battens and counter battens.

To match*

Our Uni Tape

(More about this on p. 41)

*Not included in the scope of delivery.



Exemplary roof structure with the installed Eurotec roof lining/sarking membrane Top 180.

MAIN FEATURES

Surface-related mass	approx. 180g/m²	Water vapour permeability	3000 g/m²/24h
SD value	approx. 0.02 m	UV resistance	4 months*
Water permeability	W1	Roll size	75 m² (1.5 m x 50 m)
Pallet	40 rolls	UV exposure time	4 weeks

*Based on artificial ageing tests conducted in a laboratory, the UV stabilisation lasts for up to 4 months, in terms of an average sun exposure typical for the Central European climate.

TECHNICAL INFORMATION

Essential features	Harmonised technical specification	Values	Class/values
Fire performance	EN 13501-1	E	Klasa
Watertightness	EN 1928	W1	Klasa
Tear strength longitudinal	EN 12311-1 EN 13859-1	360 N/50 mm (+/- 50 N/50 mm)	MDV
Tear strength transverse	EN 12311-1 EN 13859-1	250 N/50 mm (+/- 35 N/50 mm)	MDV
Elongation longitudinal	EN 12311-1 EN 13859-1	35%–70%	MDV
Elongation transverse	EN 12311-1 EN 13859-1	50%–90%	MDV
Tear propagation longitudinal	EN 12310-1 EN 13859-1/ B	250 N (+/-50N)	MDV
Tear propagation transverse	EN 12310-1 EN 13859-1/ B	200 N (+/-50 N)	MDV
Low-temperature flexibility	EN 1109	at -40°C conforming	MLV
Artificial ageing in terms of:	**Annexe C EN 13859-1**		
Watertightness	EN 1928	W1	Class
Tear strength longitudinal	EN 12311-1 EN 13859-1	320 N (+/-50 N)	MLV
Tear strength transverse	EN 12311-1 EN 13859-1	230 N (+/-40 N)	MLV
Elongation longitudinal	EN 12311-1 EN 13859-1	25%–60%	MDV
Elongation transverse	EN 12311-1 EN 13859-1	40%–80%	MDV
Length	EN 1848-2	50 m (-0%)	MLV
Width	EN 1848-2	1.5 m (-0.5%) or 3.0 (-0.5%)	MLV
Mass per unit area	EN 1848-2	180 g/m² (+/-10 gm²)	MDV
Straightness	EN 1848-2	Conforming	MDV
Water vapour permeability	EN 12572/C	Sd = 0.025 m (-0.01/+0.035)	MDV

INSTRUCTIONS FOR USE

For use as an underlay for insulated and ventilated pitched roofs, here also for roofs with board cladding. Very well suited for roof renovations and loft renovations in "inverted roof systems". If the roof covering is unventilated, the roof lining membrane is used in direct contact with the thermal insulation (mineral wool, glass wool, etc.), which has the advantage that the roof lining membrane can be installed directly on top of the thermal insulation. The roof covering is attached to the roof lining membrane using roof battens and counter battens. Suitable for almost all roof systems – especially under roofing tiles, stones, pantile profiles, aluminium sheets, etc.

VAPOUR BARRIER DB 140

Protection against moisture from the interior

The vapour barrier DB 140 is a three-layer active vapour barrier. It consists of two layers of a polypropylene fleece material and a functional film that **controls the vapour passage to the loft or the building's interior.** The membrane's active properties act to support the removal of moisture, which is not guaranteed by normal vapour barrier films.
The vapour barrier DB 140 is **used as a vapour barrier in residential and industrial construction projects and protects the loft from excessive moisture penetration** from the room interior into the thermal insulation. Thanks to its active properties, it **prevents,** among other things, **the formation of mould** in the loft due to excessive moisture and thus protects the structural timbers from rot.

Vapour barrier DB 140

Item number	Designation	Dimensions	PU
954201	DB 140	140 g/m²; 1.5 m x 50 m	1

ADVANTAGES

- Active vapour regulation
- Tensile strength
- UV resistance
- Quick and easy installation
- With two self-adhesive tapes

NOTE

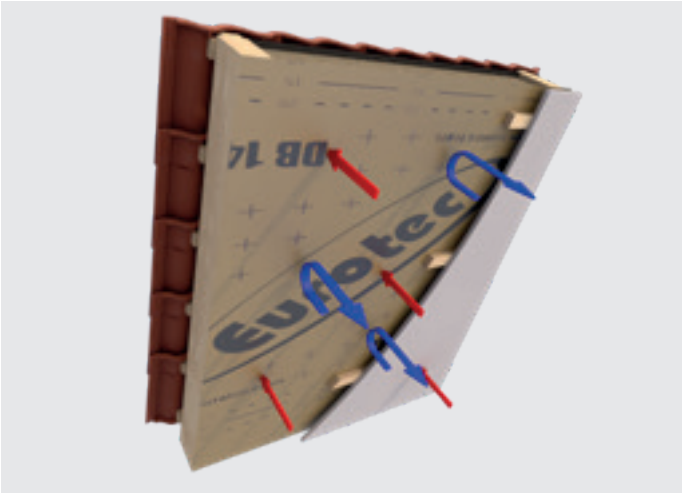
Only suitable for interior applications.

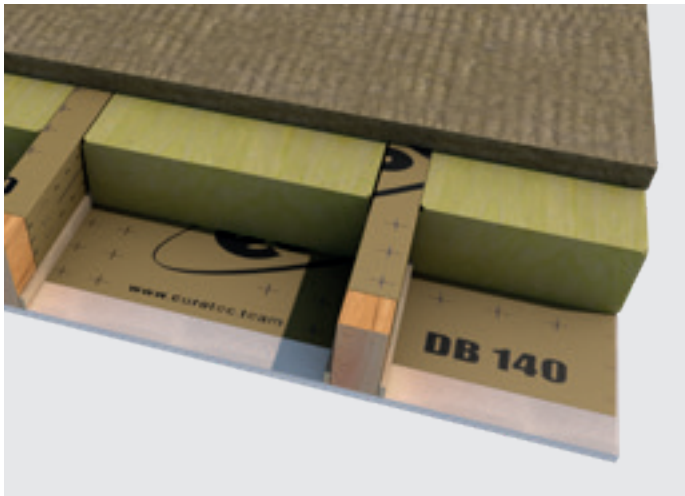
To match*

Our Uni Tape

(More about this on p 41)

*Not included in the scope of delivery.





The membranes in the vapour barrier layer are integrated into the thermal insulation to protect it against water vapour penetration. The product's unique properties facilitate the active regulation of the vapour transfer process, thereby preventing condensation and the resulting damage to timber structures. During roof renovations, the DB140 can also be installed in loops.

MAIN FEATURES

kg	Surface-related mass	approx. 140 g/m²		Water vapour permeability	3000 g/m²/24h
SD	SD value	≥ 8 m +/- 2 m	UV	UV resistance	4 months*
	Water permeability	W1		Roll size	75 m² (1.5 m x 50 m)
	Pallet	50 rolls		UV exposure time	4 weeks

*Based on artificial ageing tests conducted in a laboratory, the UV stabilisation lasts for up to 4 months, in terms of an average sun exposure typical for the Central European climate.

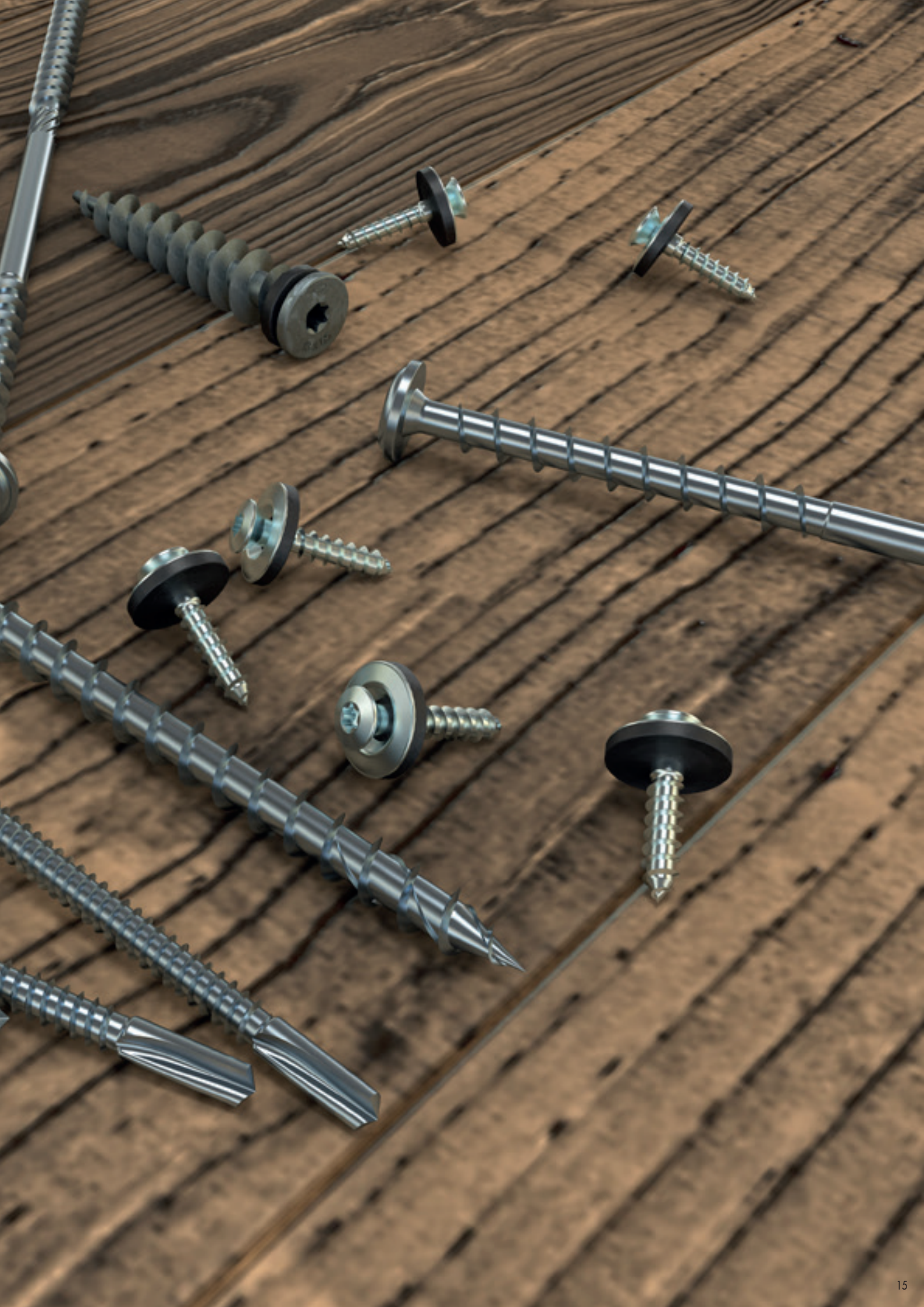
TECHNICAL INFORMATION

Features	Standards	Values
Mass per unit area	EN 1848-2	Approx. 140 g/m²
Product structure	-	3-layer PP vapour barrier
Roll length	EN 1848-2	50 m
Roll width	EN 1848-2	1.50 m
Fire performance	EN 11925-2	Class E
Resistance to water penetration	EN 1928	W1
SD value	EN 1931	≥ 8 m +/- 2 m
Operating temperature range	-	Between -30°C to +70°C
Outdoor weathering period as temporary roofing	-	2 weeks
UV resistance	-	4 months
Tear strength longitudinal	EN 12311-1	200 N/5 cm (+- 50 N)
Tear strength transverse	EN 12311-1	140 N/5 cm (+- 50 N)
Elongation longitudinal	EN 12311-1	40% (+- 20%)
Elongation transverse	EN 12311-1	40% (+- 20%)
Tear propagation longitudinal	EN 12310-1	110 N/5 cm (+- 50 N)
Tear propagation transverse	EN 12310-1	110 N/5 cm (+- 55 N)
Flexibility at low temperatures	EN 1109	Confirmed at -20 °C
CE marking/DOP	EN 13984	available

INSTRUCTIONS FOR USE

The vapour barrier is used as a vapour protection layer within the thermal insulation to prevent the ingress of water vapour. The product **actively regulates the vapour transfer to** prevent condensation and any resulting damage to timber structures. It is recommended that the overlaps be tightly sealed with our special adhesive tape, the Eurotec Uni Tape.
For use as a vapour barrier in lofts and as protection of the interior against moisture. Among other things, the active properties prevent the formation of mould as well as the risk of condensation forming in the loft. This protects the structural timbers from rot. During installation, it is absolutely necessary to use adhesive tape to both seal the overlaps between the membrane joints and to seal the connection points to the roof structure's components. Use of the Eurotec Uni Tape makes it possible to **properly seal and permanently connect the roof lining membrane in any weather condition, i.e. irrespective of** high humidity, strong winds, rain, low temperatures, dirty roof lining membrane surfaces. Use the overlap line, so that it sits at least 10 cm from the roof lining membrane edge.

ROOF FIXINGS



TOPDUO ROOFING SCREW

The wood construction screw for every above-rafter insulation system

The Topduo roofing screw can be used to fasten **both pressure- and non-pressure-resistant rafter insulations**. The high extraction resistance in both connecting timbers is what also makes the Topduo attractive for **many other wood construction applications**. The screw has a double thread and is available with both washer and cylinder heads.

ADVANTAGE

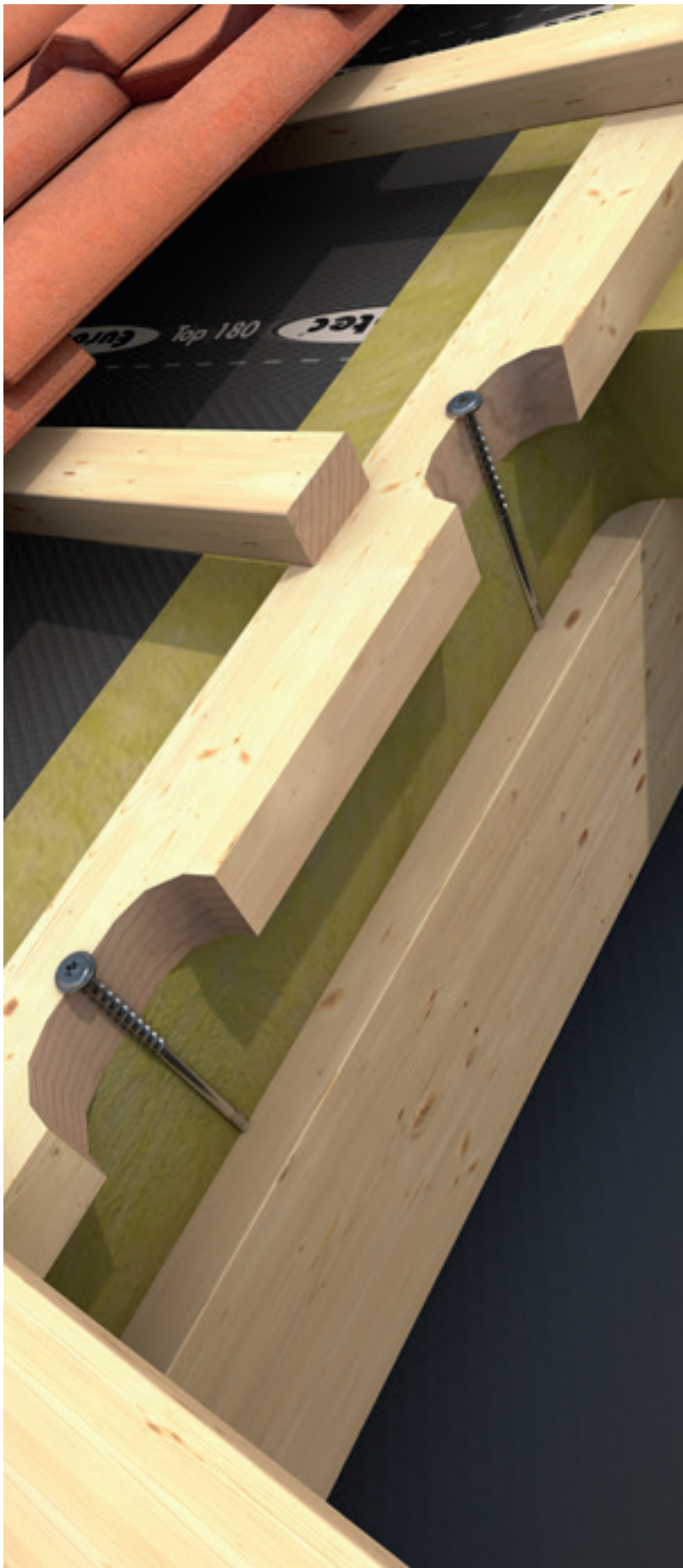
- The double thread allows the fastening of both pressure-resistant as well as non-pressure-resistant insulating materials.
- Thanks to the high pull-out resistance, it is universally usable in many timber construction applications.
- Resistant to mechanical stress

ADVANTAGES OF THE SCREW TIP

- Reduced screw-in torque
- Reduced splitting effect
- The screw "grips" better

Topduo roofing screw
Washer head screw

Topduo roofing screw
Cylinder head



EuroTec calculation service

On-rafter insulation according to ETA-11/0024

by phone 02331 6245-444 · by fax 02331 6245-200 · by e-mail technik@eurotec.team

Please contact our technical department or use the free calculation services in the service section of our website.

Contact

Trader: _____ Contractor: _____

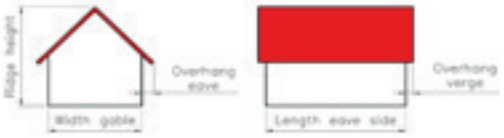
Contact person: _____ Contact person: _____

e-mail: _____ Phone: _____

Project: _____ e-mail: _____

Project details

☐ Shed roof ☐ Gable roof ☐ Hip roof



Building length eave side: _____ m

Gable width: _____ m

Rafter length: _____ m
(this information is optional)

Ridge height: _____ m
(above ground)

Roof overhang: eave _____ /verge _____ m
(quantity is determined for total roof area)

Roof pitch: main roof _____ /hip _____ °

Product name insulation: _____
(Maker`s product designation)

Insulation thickness: _____ mm

Rafter width: _____ mm

Rafter heigth: _____ mm

Rafter center distance: _____ mm

Sheathing thickness: _____ mm

Counter batten width: _____ mm
(min. 60 mm)

Counter batten height: _____ mm
(min. 40 mm)

Counter batten length: _____ m
(longest piece of counter batten)

Load from roofing and battens:

☐ Standing seam metal roofing 0,35 kN/m²

☐ Concrete tile, clay tile 0,55 kN/m²

☐ Flat tile roofing 0,75 kN/m²

or _____ kN/m²

Postcode of project: _____
(to determine the wind and snow load zone)

charact. snow load on ground sk: _____ kN/m²
(only for municipalities with special provision)

Site elevation above sea level: _____ m
(important for municipalities with complex relief)

Snow guard provided? ☐ Yes ☐ No

Screw selection

☐ Paneltwistec countersunk head * ☐ Paneltwistec washer head * ☐ Topduo flange button head screw ** ☐ Topduo cylinder-head **

* only for compression-proof insulations with compression strength ≥ 50 kPa ** also for non-compression-proof insulations

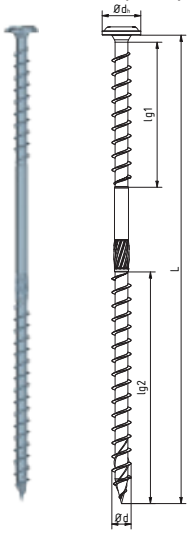
Information on the processing of your personal data can be found at the following link: https://www.eurotec.team/en/data-protection

TOPDUO ROOFING SCREW

The wood construction screw for every above-rafter insulation system

Topduo roofing screw

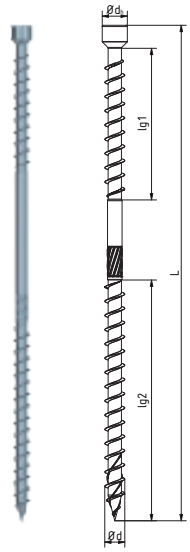
Washer head screw, specially coated



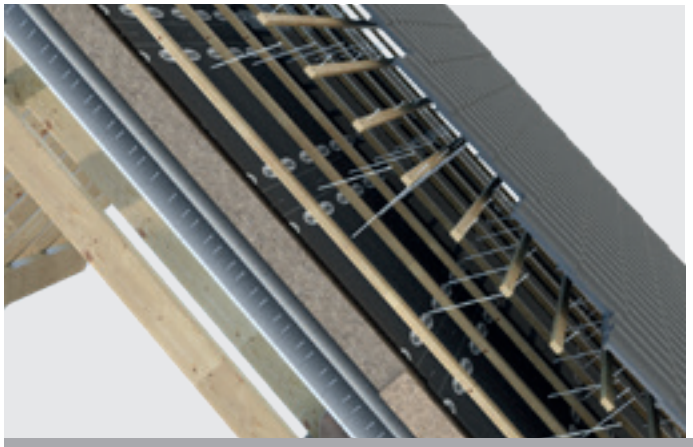
Item number	Ø d [mm]	L [mm]	Ø dh [mm]	lg1/lg2 [mm]	Drive	PU
945870	8.0	165	16.0	60/66	TX40	50
945871	8.0	195	16.0	60/95	TX40	50
945813	8.0	225	16.0	60/95	TX40	50
945814	8.0	235	16.0	60/95	TX40	50
945815	8.0	255	16.0	60/95	TX40	50
945816	8.0	275	16.0	60/95	TX40	50
945817	8.0	302	16.0	60/95	TX40	50
945818	8.0	335	16.0	60/95	TX40	50
945819	8.0	365	16.0	60/95	TX40	50
945820	8.0	397	16.0	60/95	TX40	50
945821	8.0	435	16.0	60/95	TX40	50
945843	8.0	472	16.0	60/95	TX40	50

Topduo roofing screw

Cylinder head, specially coated



Item number	Ø d [mm]	L [mm]	Ø dh [mm]	lg1/lg2 [mm]	Drive	PU
945956	8.0	225	10.0	60/95	TX40	50
945965	8.0	235	10.0	60/95	TX40	50
945957	8.0	255	10.0	60/95	TX40	50
945958	8.0	275	10.0	60/95	TX40	50
945960	8.0	302	10.0	60/95	TX40	50
945961	8.0	335	10.0	60/95	TX40	50
945962	8.0	365	10.0	60/95	TX40	50
945963	8.0	397	10.0	60/95	TX40	50
945964	8.0	435	10.0	60/95	TX40	50



On-roof insulation on a pitched roof using Topduo roofing screws.

QUANTITY DETERMINATION TOPDUO ROOFING SCREW
STATICALLY NOT PRESSURE-RESISTANT INSULATION MATERIALS WITH $\Sigma_{10\%}$ < 50 KPA

Design example for the abovementioned assumptions; project-related designs may produce much more favourable results

Number of Topduo screws per m²

Insulation thickness		40	60	80	100	120	140	140	160	180	200	220	240	260	280
Formwork thickness (on rafters)		24	24	24	24	24	–	24	24	24	24	24	24	24	24
Dimension Topduo TK or ZK[a]		8 x 165[b]	8 x 195[b]	8 x 225	8 x 235	8 x 255	8 x 275	8 x 302	8 x 335	8 x 335	8 x 365	8 x 365	8 x 397	8 x 435	8 x 435
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
Snow load zone 2*[c] Wind zone 4[d] Height above MSL ≤ 285 m	0° ≤ DN ≤ 10°	2.20	2.20	2.38	2.38	2.38	2.38	2.38	2.29	2.29	2.48	3.01	3.57	4.08	4.76
	10° < DN ≤ 25°	2.38	2.38	2.60	2.60	2.60	2.60	2.60	2.60	2.60	3.17	3.81	4.40	e)	e)
	25° < DN ≤ 40°	2.72	2.72	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.57	4.40	5.19	e)	e)
	40° < DN ≤ 60°	2.86	3.01	3.17	3.17	3.36	3.36	3.36	3.36	3.36	3.57	4.40	5.19	e)	e)
Snow load zone 3[f] Wind zone 2[g] Height above MSL ≤ 600 m	0° ≤ DN ≤ 10°	1.79	1.79	1.97	2.04	2.04	2.04	2.04	2.12	2.60	3.81	4.40	5.19	e)	e)
	10° < DN ≤ 25°	2.29	2.29	2.48	2.60	2.60	2.60	2.60	2.72	3.36	4.76	e)	e)	e)	e)
	25° < DN ≤ 40°	2.38	2.48	2.72	2.72	2.72	2.86	2.86	2.86	3.57	5.19	e)	e)	e)	e)
	40° < DN ≤ 60°	2.60	2.60	2.86	2.86	2.86	2.86	2.86	3.01	3.57	5.19	e)	e)	e)	e)

a) The indicated quantity always refers to the less favourable value from Topduo TK and ZK
b) Only Topduo TK, c) Includes snow load zones 1, 2 and 2*, d) Includes all wind zones except the North Sea islands
e) Use of our project-related design service is recommended. The design examples listed here represent unfavourable, i.e. statically safe, cases.
f) Includes snow load zones 1, 2 and 3, g) Includes wind zones 1 and 2 (inland)

Further assumptions:

Design produced with the ECS design software according to ETA-11/0024; screw-in angle of 65°; gable roof; max. ridge height above the ground of 18 m; bulk density of the insulation 1.50 kN/m³; rafters C24 8/≥12 cm; counter batten C24 4/6 cm; rafter centre distance 0.70 m; dead weight of covering 0.55 kN/m²; roof snow guard available; quantity determination with respect to the wind suction based on the most unfavourable roof area.
All stated values must be considered as dependent on the assumptions made. They therefore represent design examples and are subject to typographical or printing errors.

Attention: These are planning aids. The projects must always be designed by authorised persons.

QUANTITY DETERMINATION TOPDUO ROOFING SCREW
STATICALLY PRESSURE-RESISTANT INSULATING MATERIALS WITH $\Sigma_{10\%}$ ≥ 50 KPA

Design example for the abovementioned assumptions; project-related designs may produce much more favourable results

Number of Topduo screws per m²

Insulation thickness		40	60	80	100	120	140	160	180	200	220	240	260	280	300
Formwork thickness (on rafters)		24	24	24	24	24	24	24	24	24	24	24	24	24	24
Dimension Topduo TK or ZK[a]		8 x 195[b]	8 x 225	8 x 235	8 x 255	8 x 275	8 x 302	8 x 335	8 x 335	8 x 365	8 x 365	8 x 397	8 x 435	8 x 435	8 x 472[b]
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
Snow load zone 2*[c] Wind zone 4[d] Height above MSL ≤ 285 m	0° ≤ DN ≤ 10°	1.96	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.12	1.80	2.40	2.32
	10° < DN ≤ 25°	2.11	2.05	1.97	1.94	1.97	1.90	1.85	2.14	2.01	2.74	2.57	2.38	3.23	2.93
	25° < DN ≤ 40°	2.48	2.41	2.28	2.35	2.41	2.35	2.18	2.67	2.49	3.48	3.22	2.96	4.42	3.79
	40° < DN ≤ 60°	2.31	2.30	2.56	2.65	2.74	2.65	2.42	2.96	2.74	4.00	3.70	3.48	4.87	4.47
Snow load zone 3[f] Wind zone 2[g] Height above MSL ≤ 400 m	0° ≤ DN ≤ 10°	2.65	2.54	2.39	2.34	2.26	2.23	2.34	2.34	2.16	2.46	2.32	2.19	2.86	2.65
	10° < DN ≤ 25°	4.04	3.81	3.55	3.33	3.33	3.15	3.15	2.99	2.99	3.66	3.37	3.06	4.37	3.74
	25° < DN ≤ 40°	4.46	4.16	3.84	3.58	3.58	3.58	3.37	3.37	3.37	4.67	4.20	3.92	e)	e)
	40° < DN ≤ 60°	3.55	3.26	3.26	3.26	3.44	3.26	2.96	3.66	3.44	e)	4.67	4.27	e)	e)

a) The indicated quantity always refers to the less favourable value from Topduo TK and ZK
b) Only Topduo TK, c) Includes snow load zones 1, 2 and 2* each with a roof snow guard, d) Includes all wind zones except the North Sea islands
e) Use of our project-related design service is recommended. The design examples listed here represent unfavourable, i.e. statically safe, cases.
f) Includes snow load zones 1, 2 and 3, g) Includes wind zones 1 and 2 (inland)

Further assumptions:

Design produced with the ECS design software according to ETA-11/0024; screw-in angle roof shear screw 65°/wind suction screw 90°; gable roof; max. ridge height above the ground of 18 m; bulk density of the insulation 1.50 kN/m³; rafters C24 8/≥12 cm; counter batten C24 4/6 cm; rafter centre distance 0.70 m; dead weight of covering 0.55 kN/m²; roof snow guard available; quantity determination with respect to the wind suction based on the most unfavourable roof area.
All stated values must be considered as dependent on the assumptions made. They therefore represent design examples and are subject to typographical or printing errors.

Attention: These are planning aids. The projects must always be designed by authorised persons.

SANDWICH PANEL SCREW

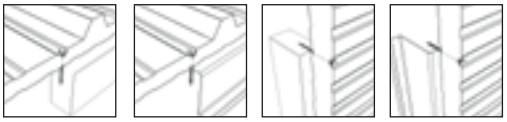
For fastening sandwich panel elements to steel

Sandwich panel screw

Bimetall

5 mm

0–280 mm

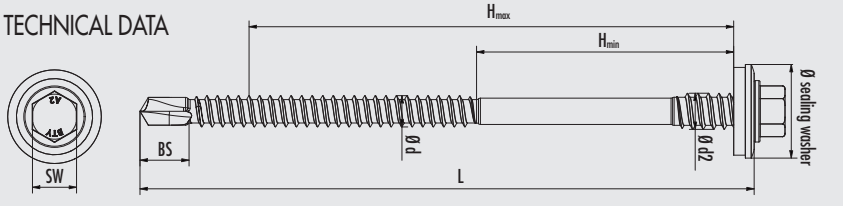


Item number	Ø d/d2 [mm]	L [mm]	lg [mm]	BS [mm]	SW	Ø sealing washer [mm]	H_{min} [mm]a)	H_{max} [mm]a)	PU
Drilling performance 5 mm									
945903	5.5/6.3	155	70	7.5	SW8	16	80	135	200
945904	5.5/6.3	175	70	7.5	SW8	16	100	155	200
945846	5.5/6.3	200	70	7.5	SW8	16	125	180	200
945905	5.5/6.3	235	70	7.5	SW8	16	160	215	200
945906	5.5/6.3	250	70	7.5	SW8	16	175	230	200
945907	5.5/6.3	275	70	7.5	SW8	16	200	255	200
945908	5.5/6.3	300	70	7.5	SW8	16	225	280	200

A) H = clamping thickness = attachment part thickness + sheet metal thickness t; $t_{max.}$ = drilling capacity

Attention: No red tip, for illustrative purposes only.

TECHNICAL DATA



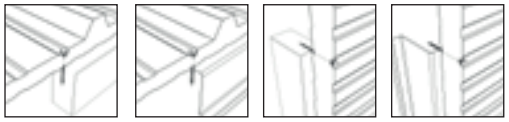
Fastening of a sandwich panel to a steel substructure using a sandwich panel screw.

Sandwich panel screw

Bimetall

12 mm

0–275 mm

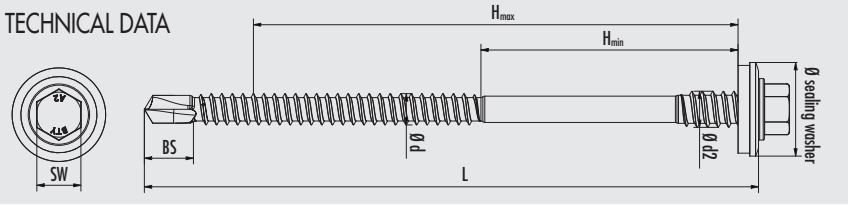


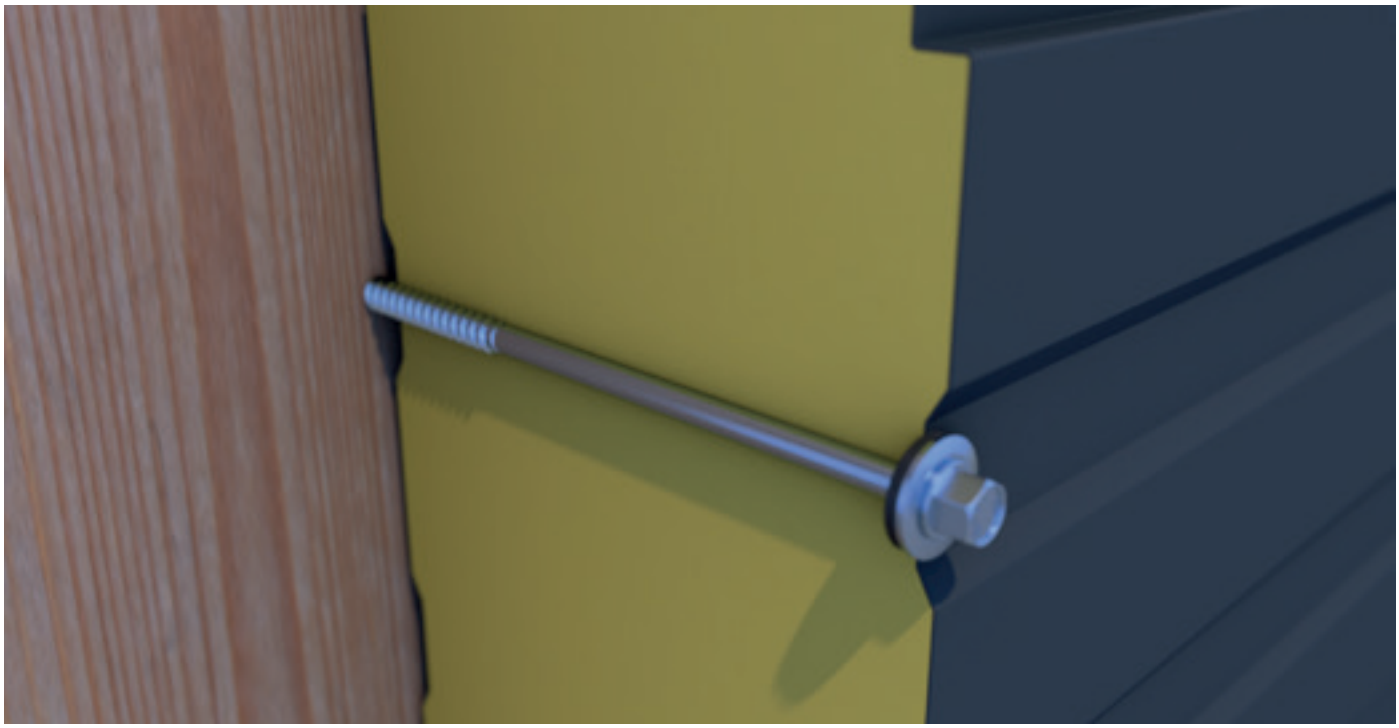
Item number	Ø d / d2 [mm]	L [mm]	lg [mm]	BS [mm]	SW	Ø sealing washer [mm]	H_{min} [mm]a)	H_{max} [mm]a)	PU
Drilling performance 12 mm									
945909	5.5/6.3	155	70	15	SW8	16	75	130	200
945910	5.5/6.3	175	70	15	SW8	16	95	150	200
945845	5.5/6.3	200	70	15	SW8	16	120	175	200
945911	5.5/6.3	235	70	15	SW8	16	155	210	200
945912	5.5/6.3	250	70	15	SW8	16	170	225	200
945913	5.5/6.3	275	70	15	SW8	16	195	250	200
945914	5.5/6.3	300	70	15	SW8	16	220	275	200

A) H = clamping thickness = attachment part thickness + sheet metal thickness t; $t_{max.}$ = drilling capacity

Attention: No red tip, for illustrative purposes only.

TECHNICAL DATA

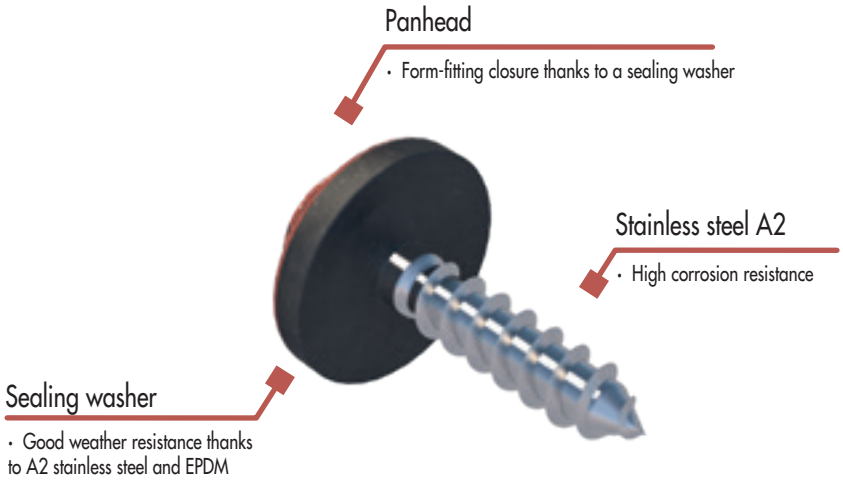




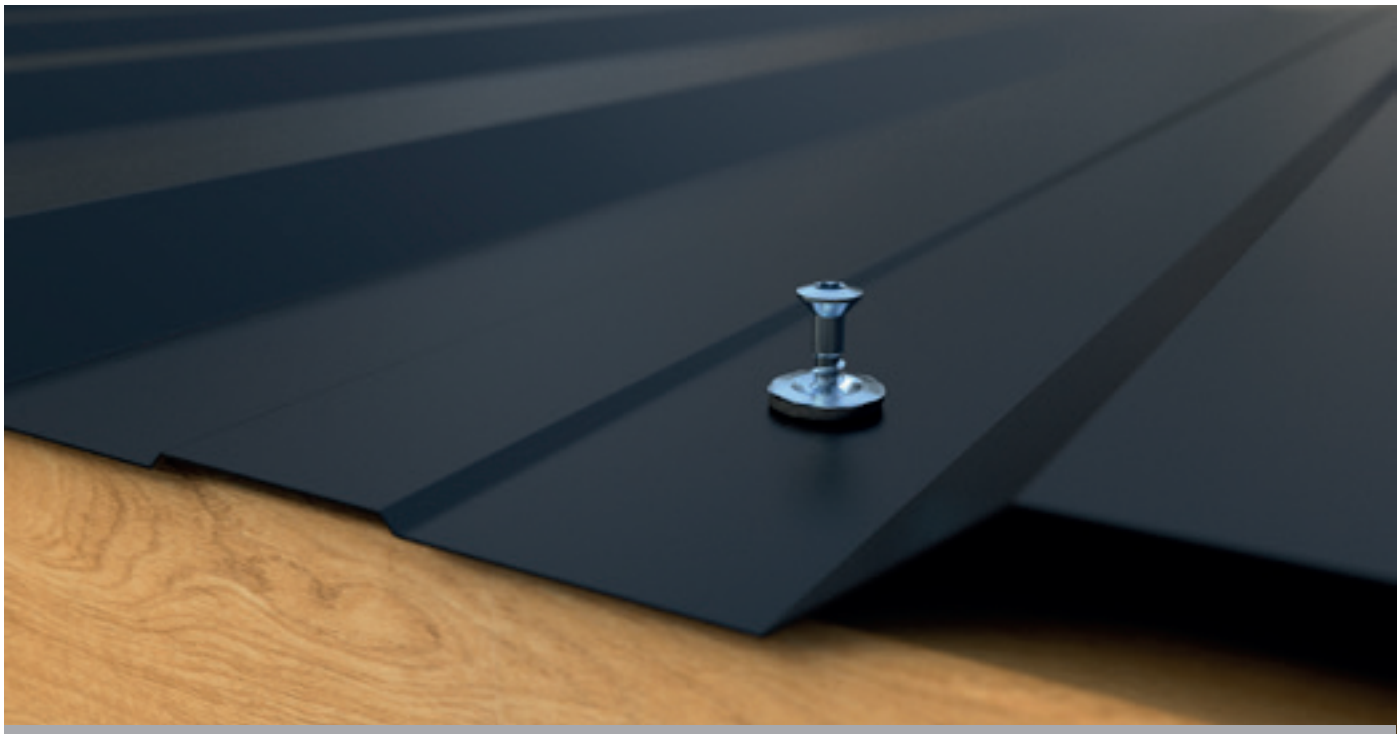
WASHERED SCREW

For fastening elements to a building wall

The washered screws made of A2 stainless steel are suitable for both indoor and outdoor applications. They are used, among other things, for the permanently tight fastening of wall connection profiles, wall covers, skylights as well as roof and chimney flashing. In principle, the heads can be coated in any RAL colour* and can therefore be colour matched to the various fastening elements.



*Carmine red, black/grey and white are standard in the range.



Fastening of a trapezoidal metal sheet using a washered screw.

Washered screw

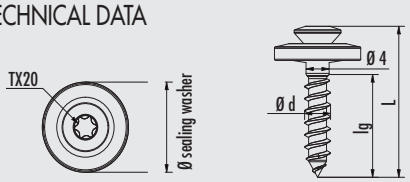
Stainless steel A2, 2-piece incl. a sealing washer

Item number	Ø d [mm]	L [mm]	lg [mm]	Ø sealing washer[mm]	Drive	PU
111550	4.5	20	12	15	TX20	200
111551	4.5	25	17	15	TX20	500
111552	4.5	35	24	15	TX20	200
111553	4.5	45	34	15	TX20	200
111557	4.5	65	45	15	TX20	200
111558	4.5	80	60	15	TX20	200
111559	4.5	100	80	15	TX20	200
111560	4.5	120	98.5	15	TX20	200
111561	4.5	150	128.5	15	TX20	200

Carmine red, black/grey and white are standard in the range.

Other RAL colours are available on request.

TECHNICAL DATA



ON REQUEST, THE SCREW HEADS CAN BE SUPPLIED IN RAL COLOURS.

Fastening of a wall connection bar to a house wall using a washered screw.

ROOFING SCREW

For flat roof insulation projects (with non-slip finish)

Roofing screw

With hexagonal head, support thread and drill tip

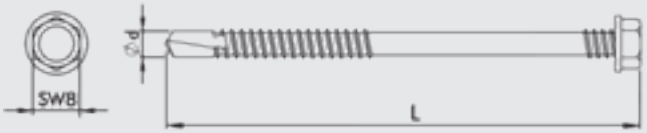
Item number	Dimension [mm]	Spanner size	PU
900428	4.8 x 80	SW8	500
111377*	4.8 x 100	SW8	500
111378	4.8 x 120	SW8	500
111379	4.8 x 140	SW8	500
111380	4.8 x 160	SW8	500
111381	4.8 x 180	SW8	500
111382	4.8 x 200	SW8	500
111383	4.8 x 220	SW8	500
111384	4.8 x 240	SW8	250
111385	4.8 x 260	SW8	250

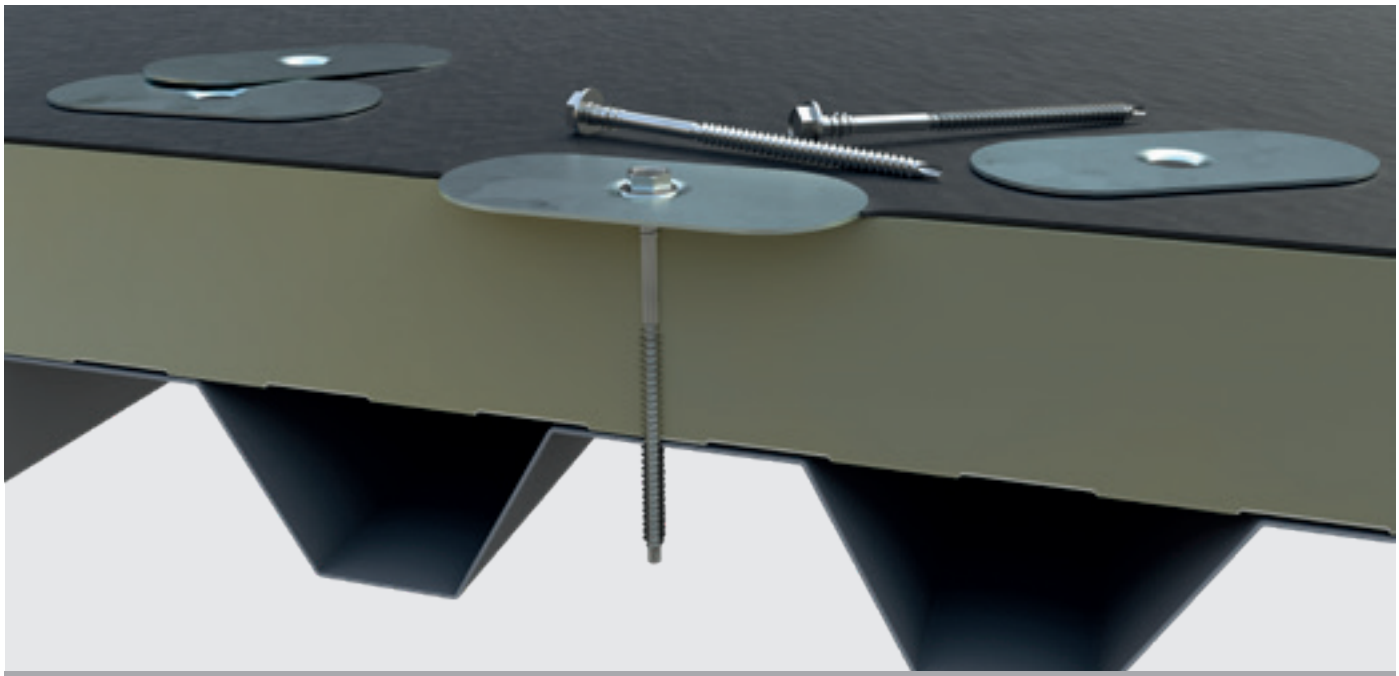
*Washer not included in the scope of delivery.

ADVANTAGES/FEATURES

- With hexagonal head
- Steel case hardened and duplex coated
- Non-slip thanks to support threads

TECHNICAL DATA





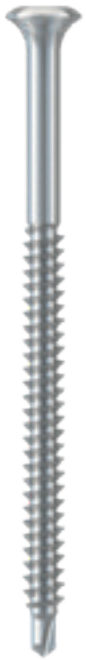
Fastening of the flat roof insulation with a roofing screw and plate. (The plate is not included in the scope of delivery.)

BUGLE-HEAD SCREW

For flat roof insulation projects (without non-slip finish)

Bugle-head screw

With hexagonal head, support thread and drill tip



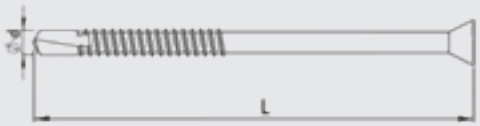
Item number	Dimension [mm]	Drive	Material	PU*
111303**	4.8 x 35	TX25 •	Steel, specially coated	1000
111304**	4.8 x 50	TX25 •	Steel, specially coated	1000
111305**	4.8 x 60	TX25 •	Steel, specially coated	1000
111306	4.8 x 70	TX25 •	Steel, specially coated	1000
111307**	4.8 x 80	TX25 •	Steel, specially coated	500
111308**	4.8 x 90	TX25 •	Steel, specially coated	500
111309**	4.8 x 100	TX25 •	Steel, specially coated	500
111310**	4.8 x 110	TX25 •	Steel, specially coated	500
111311**	4.8 x 120	TX25 •	Steel, specially coated	500
111312**	4.8 x 130	TX25 •	Steel, specially coated	500
111313**	4.8 x 140	TX25 •	Steel, specially coated	500
111314**	4.8 x 150	TX25 •	Steel, specially coated	500
111315**	4.8 x 160	TX25 •	Steel, specially coated	500
111316**	4.8 x 170	TX25 •	Steel, specially coated	500
111317**	4.8 x 180	TX25 •	Steel, specially coated	500
111318**	4.8 x 200	TX25 •	Steel, specially coated	500
111319**	4.8 x 220	TX25 •	Steel, specially coated	500
111320**	4.8 x 240	TX25 •	Steel, specially coated	500
111321**	4.8 x 260	TX25 •	Steel, specially coated	500
111322**	4.8 x 280	TX25 •	Steel, specially coated	250
111323**	4.8 x 300	TX25 •	Steel, specially coated	250

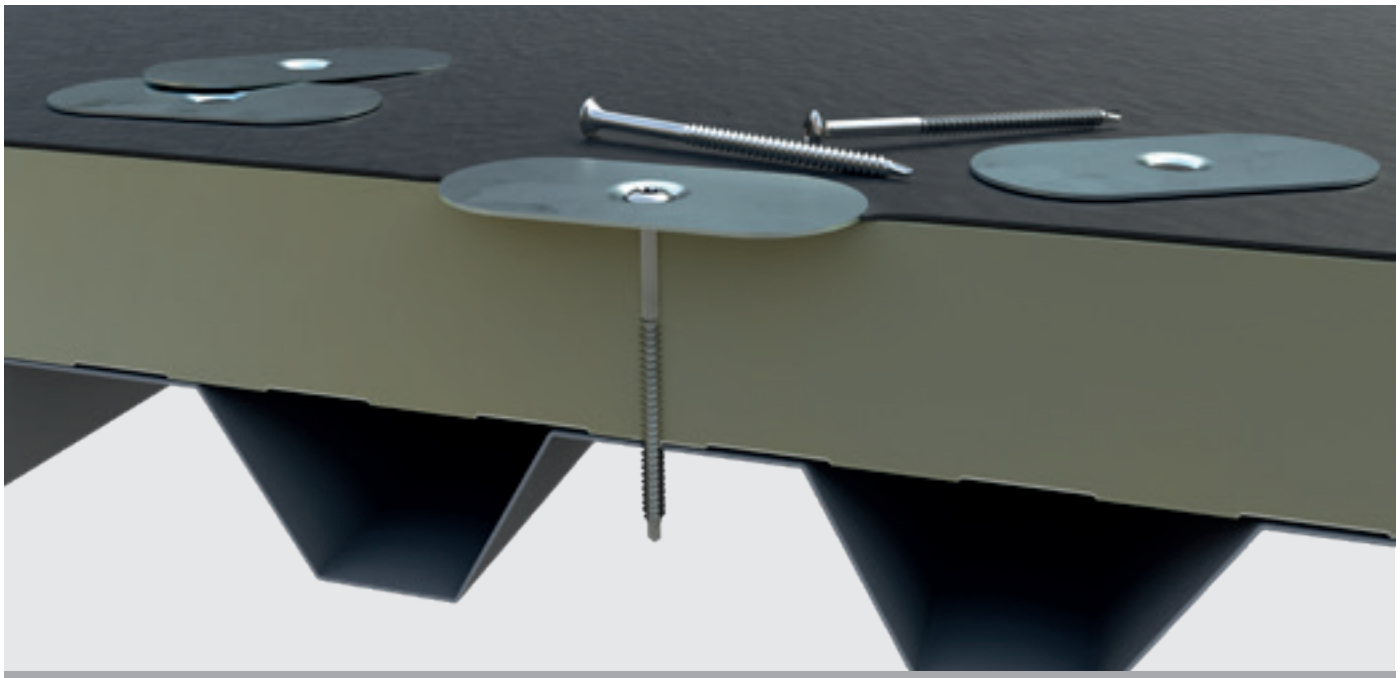
*Washer not included in the scope of delivery.
**On request

ADVANTAGES/FEATURES

- With bugle-head and drill tip
- Steel case-hardened and duplex coated
- Non-slip thanks to support threads

TECHNICAL DATA



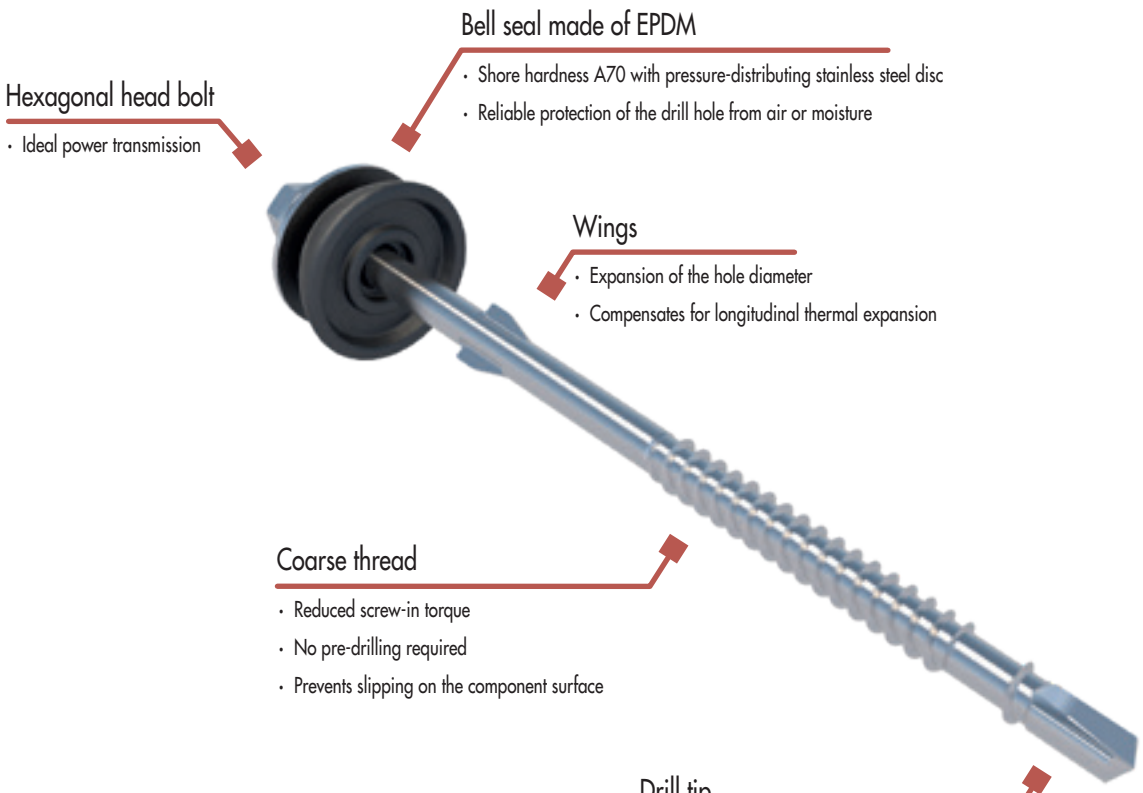


Fastening of the flat roof insulation using the bugle-head screw and plate. (The plate is not included in the scope of delivery.)

FIBRE CEMENT SCREWS

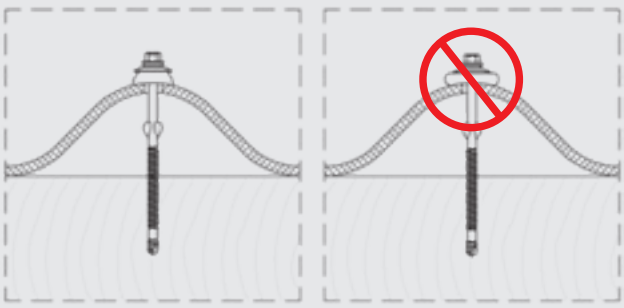
For fastening corrugated fibre cement panels to substructures made of timber

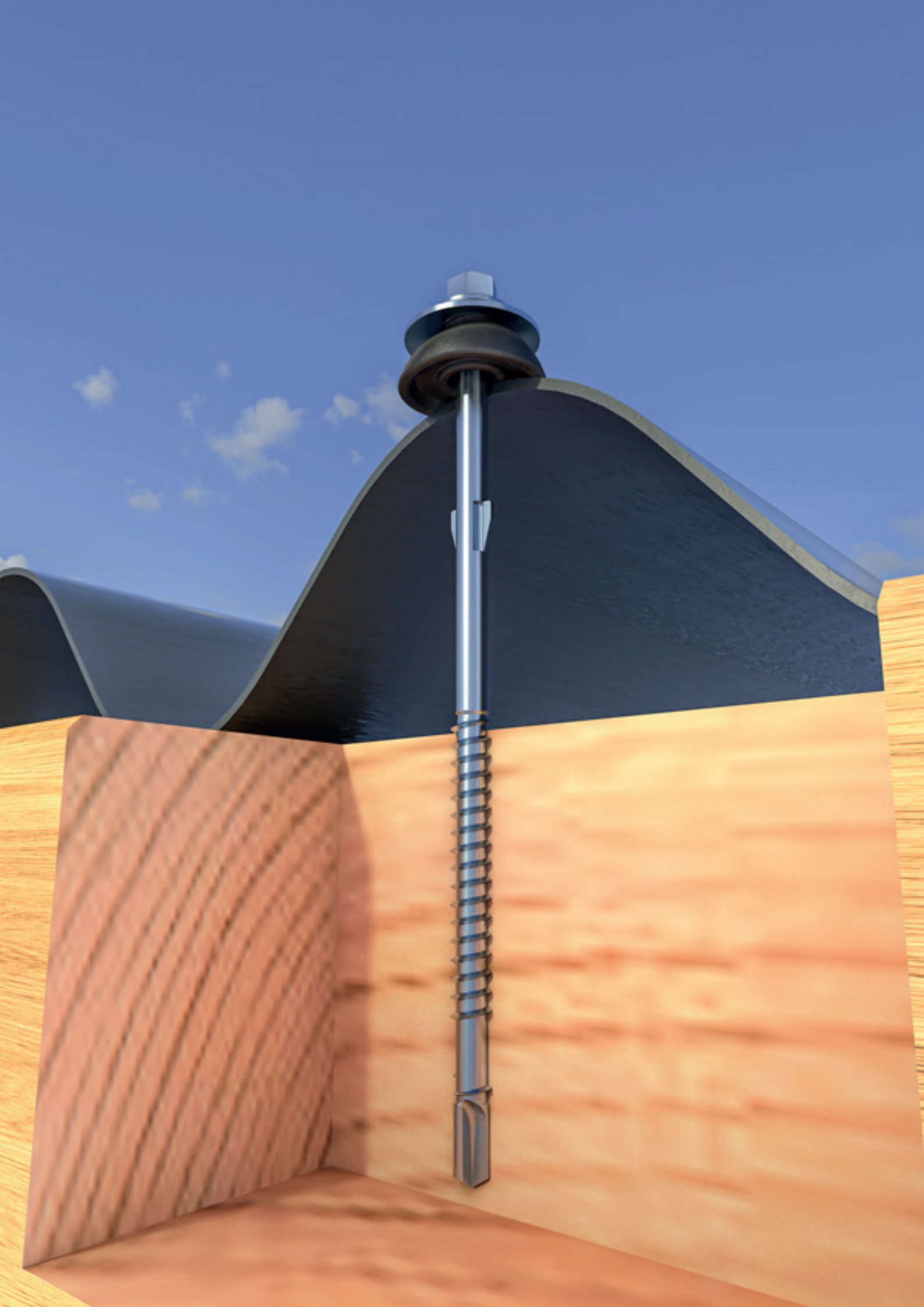
The fibre cement screw is a special screw used for fastening corrugated fibre cement panels to substructures made of timber.
The pre-assembled bell seal reliably seals the area around the screw head in the downward direction and prevents air or moisture ingress through the drill holes. The fibre cement screw is available in hardened carbon steel (specially coated) and A2 stainless steel versions, which makes it ideal for weathering.



INSTALLATION INSTRUCTION

In order to ensure the bell seal's durability and thus rain protection, the seal must not be pressed against the corrugated panel too tightly.





FIBRE CEMENT SCREWS

For fastening corrugated fibre cement panels to substructures made of timber

Fibre cement screw

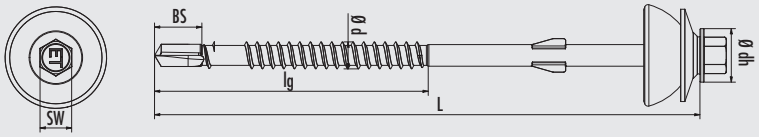
Steel, specially coated

Item number	Ø d [mm]	L [mm]	lg [mm]	BS [mm]	Head diameter dh [mm]	Drive	PU
111353	6.5	130	65	11	12.75	SW8	100

MATERIAL

- With zinc-aluminium flake lamellar coating
- High cathodic corrosion protection
- High thermal load capacity
- Barrier effect due to overlapping zinc-aluminium lamellae
- Resistant to organic solvents
- Reduced friction

TECHNICAL DATA



Fibre cement screw A2

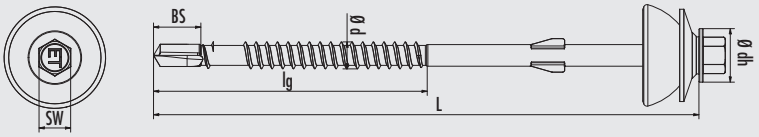
Stainless steel A2

Item number	Ø d [mm]	L [mm]	lg [mm]	BS [mm]	Head diameter dh [mm]	Drive	PU
111356	6.5	130	65	11	12.75	SW8	100

MATERIAL

- Limited suitability for saline atmospheres
- Limited acid resistance
- Not suitable for chlorous atmospheres
- Suitable for service classes 1, 2 and 3
- Limited suitability for timbers that are high in tannins such as cumaru, oak, Merbau, robinia etc.

TECHNICAL DATA



Instructions for use

Fibre cement corrugated sheets are attached using fibre cement screws, which come with a pre-assembled bell seal. Depending on the manufacturer, corrugated fibre cement panels may have to be pre-drilled. The fibre cement screws should be screwed in perpendicular to the panel plane. During installation, it is imperative that the screw is positioned correctly and that the seal is checked. Overtightening of the screw can deform the seal, which can cause the seal to lose its functionality. Please follow the manufacturer's instructions for use.

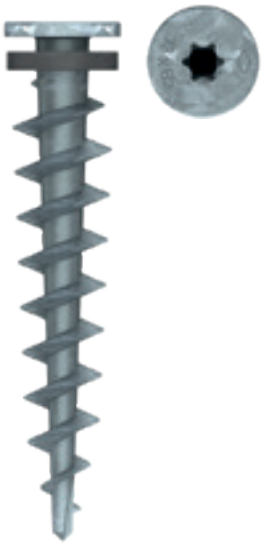
INSULATING STUD ANCHOR

Suitable for the fastening of the wall connection bar

The Eurotec insulating stud anchor is suitable for **direct anchoring in polystyrene, rigid foam boards and other soft building materials.** The anchor's conical shape ensures that the material is compacted in the area of the screw-in point and thus ensures the anchor's secure hold.

Insulating stud anchor

Zinc die casting



Item number	Dimension [mm]	Thread length [mm]	Drive	PU
200036	13 x 65	65	TX30 ●	100

ADVANTAGES

- No pre-drilling in soft materials
- Direct installation without separate plugs
- Including sealing washer
- Thermal-bridge-free installation
- High torque transmission thanks to the TX drive

SUITABLE BUILDING MATERIALS

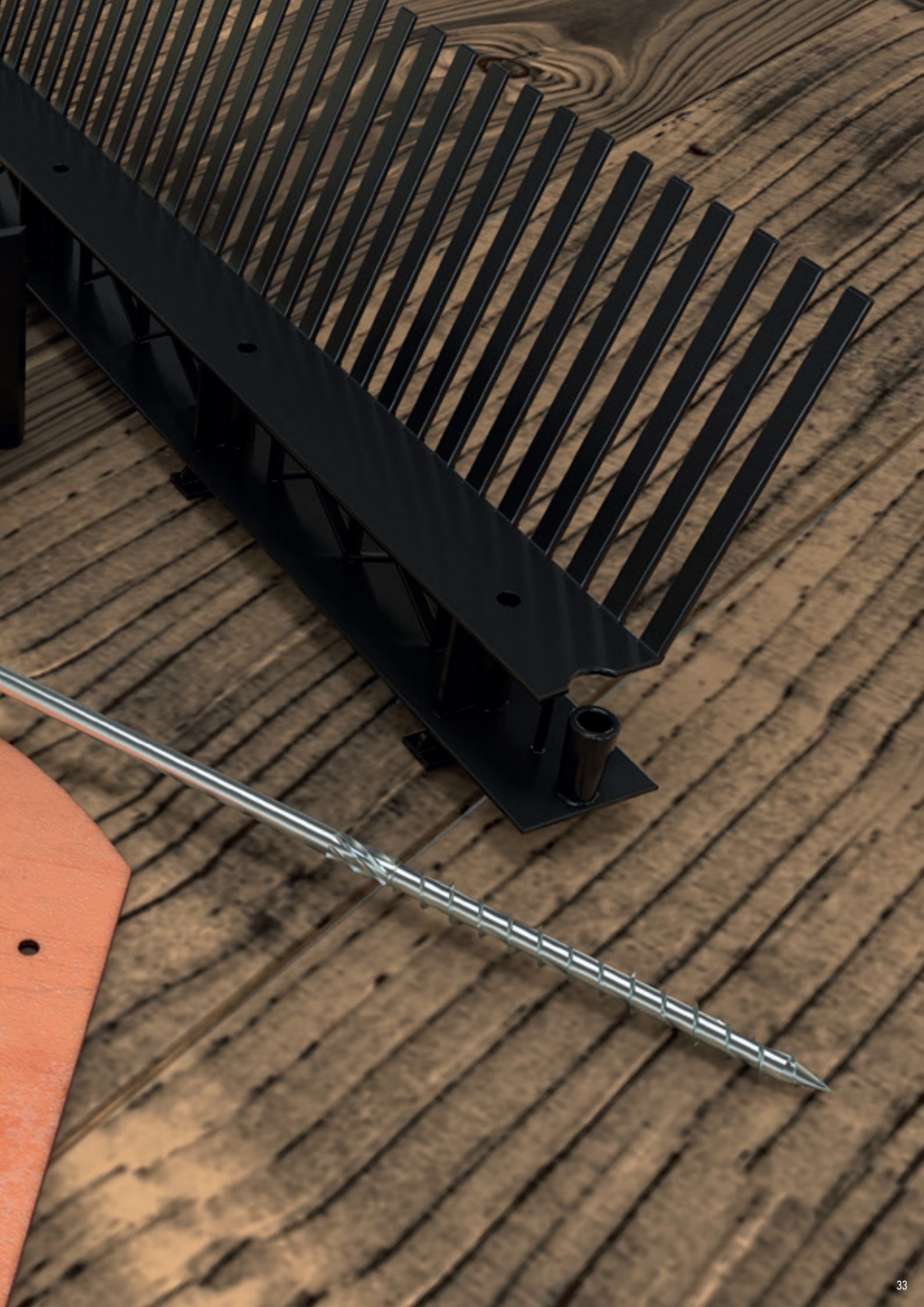
- External composite thermal insulation systems (ETICS)
- Polystyrene panels (EPS, XPS)
- Rigid foam panels
- Styrofoam plates

TECHNICAL DATA

Insulating stud anchor for direct anchoring in polystyrene.

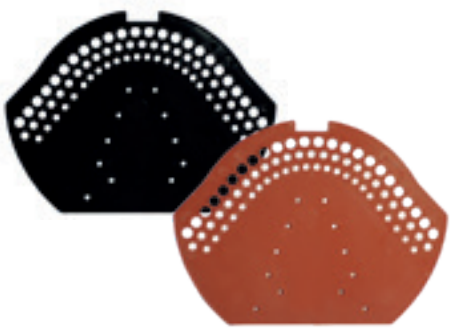
NOTES:

ROOFING ACCESSORIES



ROOFING ACCESSORIES

Ridge end disc



Item number	Dimension[a)] [mm]	Colour	Material	PU
954210	50 x 120	Red	Polymer	25
954211	50 x 120	Black	Polymer	25

[a)]Length x width

SCOPE OF APPLICATION

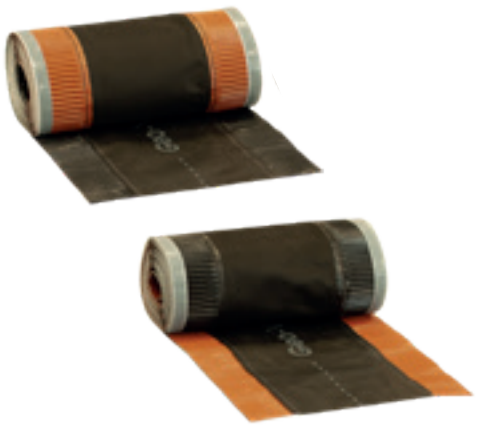
- For closing the roof ridge
- Universal shapes allow use with most com mercially available roof tiles.

ADVANTAGES

- Quick and easy installation
- Weather resistant
- Good stability
- It ensures good air circulation in the ridge area and prevents the penetration of leaves and insects.

Application example ridge end disc

Roller ridge



Item number	Designation	Dimension[a)] [mm]	Colour	PU
954208	Roller ridge	32000 x 5000	Black (RAL 9005)	1
954209	Roller ridge	32000 x 5000	Red (RAL 8004)	1

[a)]Width x length

The roller ridge vent roll is made of high-quality diffusible PP fleece (150 g) and pleated aluminium sheet metal. Thanks to the fleece, the tape allows ventilation between the eaves and the ridge. There is no risk of water or small animals getting in under the roof structure.

ADVANTAGES

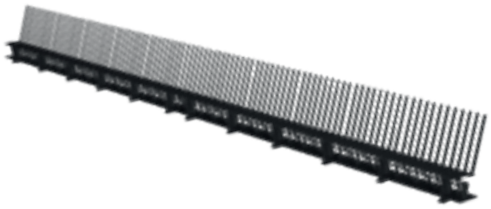
- Elastic and resistant adhesive
- Good ventilation between the eaves and ridge
- Weather resistance

Application example roller ridge

Eaves ventilation element

Item number	Dimension[a] [mm]	Material	PU
954212	85 x 1000	Polymer	50

[a] Height x length



SCOPE OF APPLICATION

- To protect the eaves from birds, rodents and large insects.
- Provides good ventilation and air circu lation in the eaves area by preventing the ingress of wind-driven leaves.

ADVANTAGES

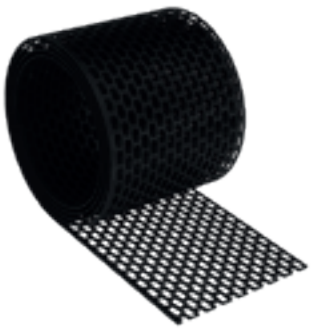
- Quick and easy installation
- Weather resistant
- Good stability
- Enables a faster and easier installation of the gutter brackets.
- An additional ventilation grate replaces the tilting fillet.

Application example eaves ventilation element

Bird protection screen/ventilation profile

Item number	Designation	Dimension[a] [mm]	Colour	PU
954214	Bird protection screen 100 white	100 x 5000	White	24
954216	Bird protection screen 80 black	80 x 5000	Black	24
954217	Bird protection screen 100 black	100 x 5000	Black	24
954218	Bird protection screen 150 black	150 x 5000	Black	24

[a] Width x length



USE

- To secure the ventilation openings on building façades and the eaves area of ventilated roofs against birds, rodents and insects.
- Provides protection against leaves and other types of contaminations.
- Ensures proper ventilation and air circulation in the façade and roof area.

ADVANTAGES

- Offers a solution that protects against leaves and other contaminations.
- Resistance to UV radiation
- Suitable for all roof types

HIP AND RIDGE BATTEN HOLDER

The hip and ridge batten holder 50 is a **fastening element for the installation of the hip or ridge batten in ventilated sloping roofs.** The hip and ridge batten holder 50 is made of glass-fibre reinforced polyamide and **is characterised by its high resistance.**

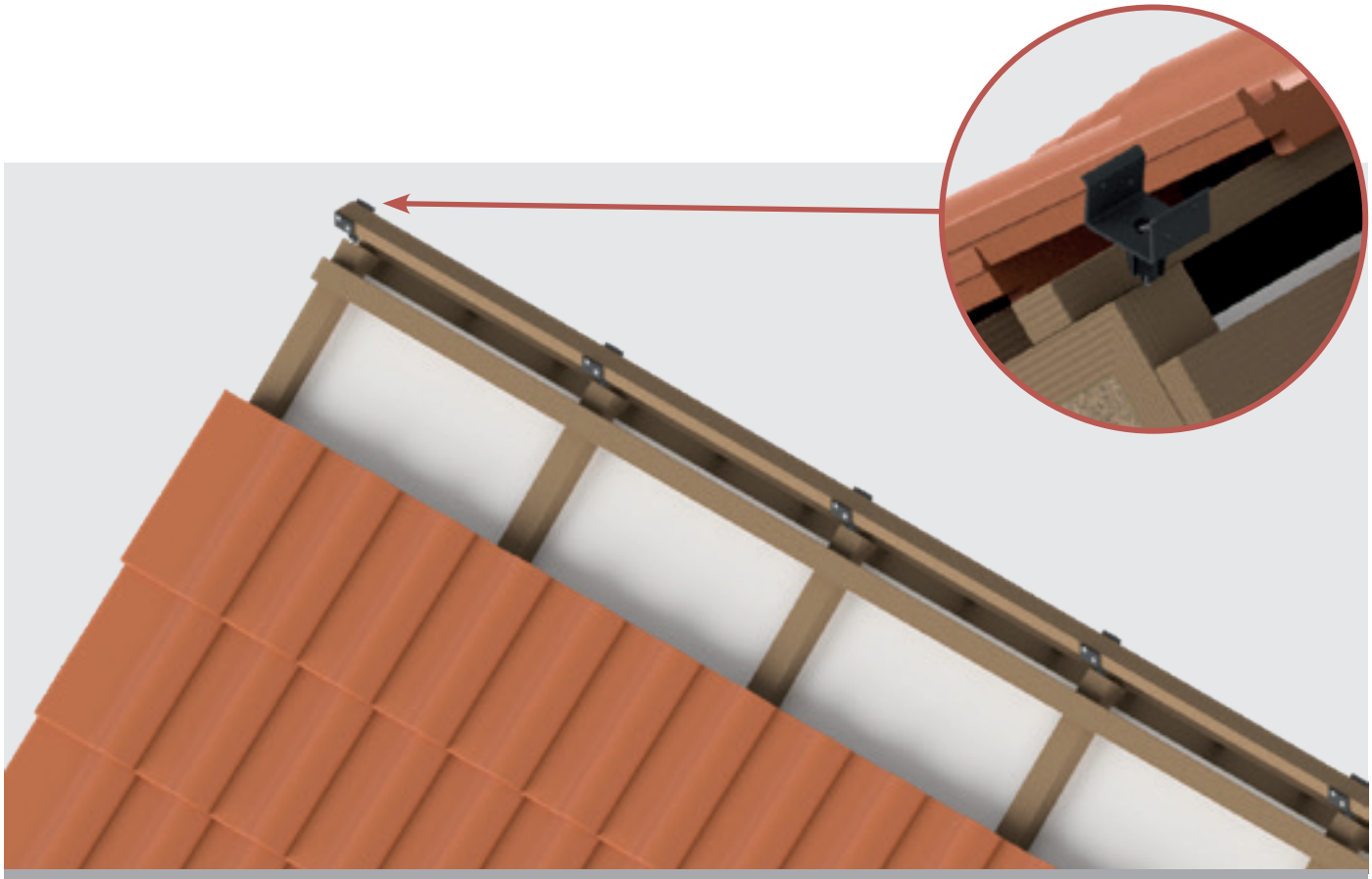
Hip and ridge batten holder 50

Item number	Product designation	Dimension[a] [mm]	Material	PU
954223	Hip and ridge batten holder 50	30 x 50	Fibreglass-reinforced, durable polyamide	100

a) Length x width

ADVANTAGES

- Quick, trouble-free and easy installation
- Individual height adjustment through infinitely variable adjustability
- Flexible application due to variable screw lengths
- High resistance to UV radiation and weathering
- With prestressing
- For 30/50 flat roof battens or 40/60 upright roof battens
- Fastening in the rafter with a Ø 6 mm countersunk head screw (installation depth at least 50 mm)
- Fastening on the holder with Ø 4 x 30 mm washer head or panhead screws
- Locking bars in the screw slot for adjustability



Installation of the hip and ridge batten holder 50 in the rafter.

OPTIMAL SCREW CONNECTION

Paneltwistec slate screw 4.0 x 30 mm
(Item no. 945868)
or
Panhead TX 4.0 x 30 mm
(Item no. 900035)

Paneltwistec slate screw

Panhead TX

Paneltwistec AG, SK 6.0 x 120 mm
(Item no. 945636)
Minimum installation depth 50 mm
in rafters.

Paneltwistec AG, SK

Installation example of the hip and ridge batten holder 50

The support element for the ridge batten, with a height adjustable ridge batten holder (205–235 mm). Use as a fastening element when installing the ridge batten on sloping, ventilated roofs. Made of galvanised steel, characterised by high resistance.

Ridge batten holder

Item number	Product designation	Dimension[a)] [mm]	Dimension[a)] [mm]	Material	PU
954205	Ridge batten holder 50	205–235	50	Galvanised steel	100

a) Length x width

ADVANTAGES

- Rapid installation of the ridge batten
- Quick, trouble-free and easy installation
- Individual height adjustment

Wall and fireplace connection

Item number	Dimension[a)] [mm]	Colour	Material	PU
954219	5000 x 300	Black (RAL 9005)	Aluminium	1
954220	5000 x 300	Red (RAL 8004)	Aluminium	1

[a)]Length x width

The self-adhesive wall and fireplace connector ensures an easy and secure roof connection. The lead-free tape is made of a textured aluminium sheet and stained with polyester paint. The product can be used not just for seals between the wall or chimney and the roof surface but also for sealing chimneys, exterior walls and roof windows. The universal product stained with polyester dye is available in two colours: brick and black.

ADVANTAGES

- Self-adhesive wall connection tape
- Optimally malleable and easy installation
- Weather resistance, colour stability and UV resistance

Bird control spikes

Item number	Dimension[a)] [mm]	Material	PU
954207	110 x 335 x 60	Polycarbonate, galvanised steel	15

[a)]Height x length x width

SCOPE OF APPLICATION

- Ensures the protection of roofs, window sills and other house surfaces as well as façades against birds.

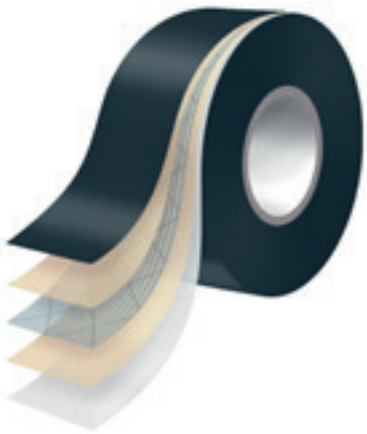
ADVANTAGES

- Quick and easy installation
- Connection of several modules
- Resistance to UV radiation

Application example bird control spikes

Uni Tape

Item number	Designation	Dimensions	PU
954202	Uni Tape	60 mm x 25 m	10



Eurotec Uni Tape is a polyethylene bonding tape with a high-strength, moisture-resistant polyacrylate adhesive that has excellent ageing resistance. Designed for the airtight bonding and sealing of penetrations and airtight membrane overlaps as well as vapour barrier films in accordance with DIN 4108-7; it is also suitable for the bonding of polypropylene fleeces, aluminium sheeting, MDF and plywood panels as well as plastics.

ADVANTAGES/FEATURES

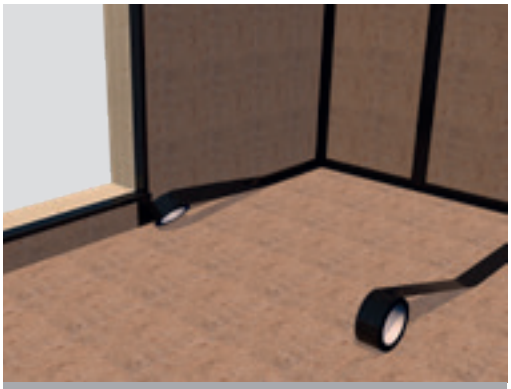
- Stretchy
- Highly flexible
- High resistance to ageing
- Permanent moisture resistance (GPM 812)
- The reinforcement prevents over stretching
- One-sided adhesive tape for cold processing
- For connecting and repairing membranes in indoor and outdoor settings
- For connecting and sealing structural elements to the membrane
- For use with our Top 150, Top 180 and DB 140

CARRIER

- Polyethylene film; thickness: 0.08 mm
- UV stable
- Reinforced with PET filament

ADHESIVE

- Polyacrylate adhesive
- Extremely high surface tack
- Medium shear strength



Application example Uni Tape

Downpipe hose

Item number	Designation	Dimension[a)] [mm]	Length [mm]	PU
954196	Downpipe hose	0.13 x 0.20 x 100 m	600	1

[a)] Ø Downpipe hose/roll x length

ADVANTAGES

- Rainwater is controlled and safely discharged.
- Can be attached and removed quickly and easily.
- Optimal interim solution for upcoming construction work.
- Façade soiling and damage are prevented.

Application example downpipe hose

Roof venting hose

Item number	Designation	Dimension [mm]	Length [mm]	PU
954208	Roof venting hose 110	Ø 110/70	600	10
954209	Roof venting hose 150	Ø 150/150	1,050	6

SCOPE OF APPLICATION

- The ventilation hose is used in pitched roofs to connect the roof hatches to the loft.

ADVANTAGES/FEATURES

- Quick and easy installation
- Resistance to UV radiation
- Large ventilation area
- Ensures an effective moisture transport from the loft.
- Proper ventilation of lofts, kitchens and bathrooms.
- The flexible structure makes it possible to adjust the duct's angle and to install the pipe reducer.

WALL CONNECTION BAR

Designed for the professional connection of roofs and façades

The Eurotec wall connection bar (capping strip) is made of extruded aluminium and designed for the **professional finishing of roofs and façades**. It acts as a **connection bar between the roof surface and the vertical component** and simultaneously protects against rainwater. In addition, the universally applicable bar is suitable for many roof coverings and ensures a **visually appealing finish.**

Wall connection bar

Aluminium, extruded

Item number	Dimension [mm][a)]	Round hole [mm]	Material	PU
954197	60 x 12.4 x 3000	Ø 8	Aluminium	1

[a)]Height x width x length

ADVANTAGES/FEATURES

- Quick and easy installation
- Pre-drilled fastening holes
- Resistant to weathering
- For universal use

USE

- Pitched roof
- Flat roof
- Façade

TECHNICAL DATA

INSTALLATION INSTRUCTIONS

The wall connection bar is screwed into the brickwork using a **washered screw** including sealing washer and plug. The Eurotec **insulating stud anchor** can also be used as an alternative for direct anchoring in **polystyrene, rigid foam panels and other soft building materials**. The round holes (Ø 8 mm) required for fastening already exist in the profile and are spaced 200 mm apart. Finally, the bar is sealed using a sealing compound to make it rainproof. Can be combined with the following Eurotec products:

- Sealing plug
- Insulation stud anchor
- Washered screw with sealing washer and EMD multi plug

The wall connection bar ensures a clean transition between the roof and façade by attaching the roofing felt to the adjacent wall and thus creating a seamless connection.

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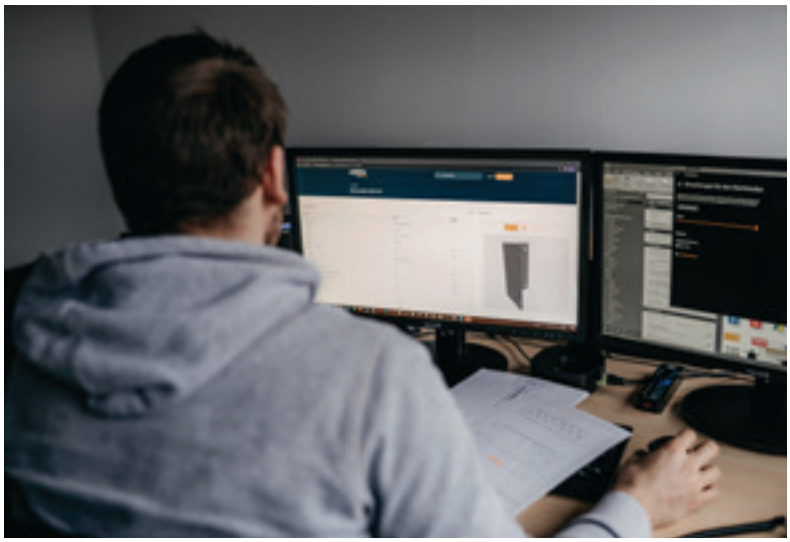

NOTES:

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The specialist for fastening technology

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