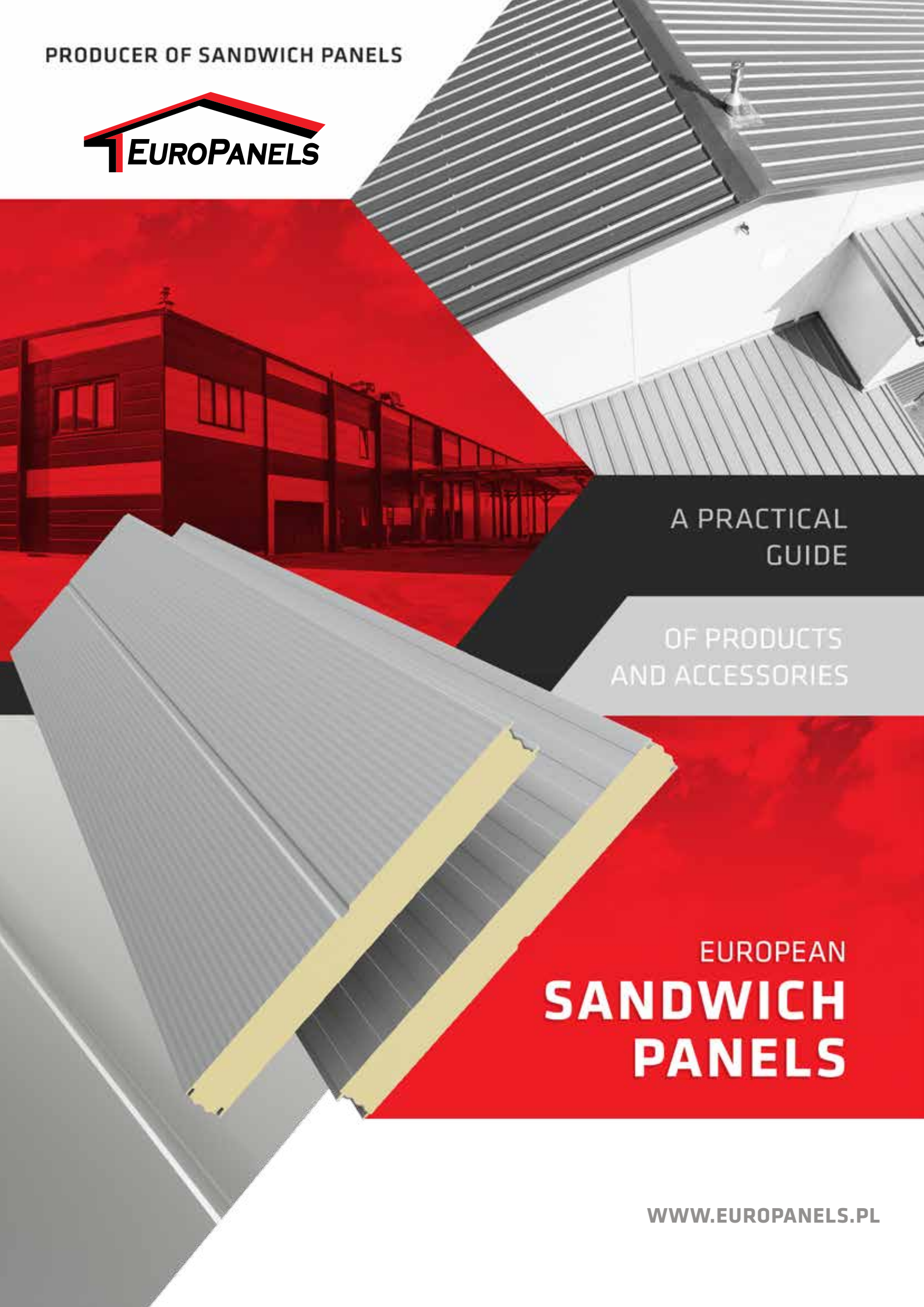


PRODUCER OF SANDWICH PANELS



A PRACTICAL
GUIDE

OF PRODUCTS
AND ACCESSORIES

EUROPEAN
**SANDWICH
PANELS**

WWW.EUROPANELS.PL

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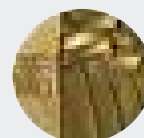
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Europanel is a dynamic and modern company offering its customers lightweight wall and roof cladding systems with a full range of finishing and assembly accessories. Our offer includes sandwich panels with a polyurethane (PU) and polystyrene (EPS) core. We have been specializing in this field for years, and our products have won the recognition of customers on the markets of many European countries. They have also been appreciated by industry professionals.

The family of wall and roof sandwich panels with PU insulation core won the Gold Medal at the 17th AGROTECH International Agricultural Technology Fair in Kielce for the best product for agro-construction. The unique system of our PolTherma DS wall sandwich panels on the European market was honoured with the prestigious Gold Medal at the 20th BUDMA International Construction Fair in Poznań for the best product of industrial construction.

Europanel sandwich panels are a modern building material, designed for use as external and internal walls, roofing and suspended ceilings. These are products of modern technology, the use of which offers many advantages: from quick and easy assembly (shortening the time of implementation and the total cost of investment) to savings during the operation of the building (very good thermal insulation properties).

This folder presents a cross-section of the Europanel range of sandwich panels and mounting accessories. It is very important to use system solutions in the field of accessories that guarantee the fit of elements and the maintenance of technological standards. For ease of reference, the folder contains installation instructions, thus becoming a practical guide for contractors. In this form we wanted to present how easy, fast, cheap and safe it is to build impressive objects from our panels.



Europanel produces sandwich panels meeting the requirements of the European standard 14509:2013-2012: Selfsupporting double skin metal faced insulating panels - Factory made products - Specifications.

Insulation panels are manufactured in accordance with the European standard PN-EN 13165+A1:2015-03: Thermal insulation products for buildings. Factory made rigid polyurethane foam (PU) products - Specification.

The CE marking confirms compliance with European quality and safety standards. However, as technical products manufactured in accordance with the standards, they are characterized by certain tolerances contained in the standards:



Dimension	Tolerance (maximum allowable)
Thickness of the panel	$D \leq 100 \text{ mm} \pm 2 \text{ mm}$ $D > 100 \text{ mm} \pm 2 \%$
Deviation from flatness (according to the length of measurement L)	For L = 200 mm - Deviation from flatness 0,6 mm For L = 400 mm - Deviation from flatness 1,0 mm For L > 700 mm - Deviation from flatness 1,5 mm
Depth of metal profile (ribs) (mm)	$5 < h \leq 50 \text{ mm} \pm 1 \text{ mm}$ $50 < h \leq 100 \text{ mm} \pm 2,5 \text{ mm}$
Depth of stiffeners and light profiling	$d_s \leq 1 \text{ mm} \pm 30\% \text{ of } d_s$ $1 \text{ mm} < d_s \leq 3 \text{ mm} \pm 0,3 \text{ mm}$ $3 \text{ mm} < d_s \leq 5 \text{ mm} \pm 10\% \text{ of } d_s$
Length of the panel	$L \leq 3 \text{ m} \pm 5 \text{ mm}$ $L > 3 \text{ m} \pm 10 \text{ mm}$
Cover width of the panel	$w \pm 2 \text{ mm}$
Deviation from squareness	$0,006 \times w$ (normal cover width)
Deviation from straightness (on length)	1 mm per meter, maximum 5 mm
Bowing	2 mm/m length, maximum 10 mm 8,5 mm/m width for flat profiles - $h \leq 10 \text{ mm}$ 10 mm/m width for profiles - $h > 10 \text{ mm}$
Pitch of the profile (p)	If $h \leq 50 \text{ mm}$ p: $\pm 2 \text{ mm}$ If $h > 50 \text{ mm}$ p: $\pm 3 \text{ mm}$
Width of the ribs (b1) and width of the valleys (b2)	For $b_1 \pm 1 \text{ mm}$ For $b_2 \pm 2 \text{ mm}$

*Calculation of the thickness of sandwich panels with profiled cladding



Sandwich panels with steel cladding are a durable material, but still prone to mechanical damage. Please pay special attention, for example, that during unloading or assembly, they do not break or scratch. We recommend the use of professional transport and assembly equipment.

Cut the plates only with suitable tools, such as a circular saw (and not a grinder!), directing the sheaf of sparks beyond the surface of the cut plate and the plates already mounted. This will avoid the deposition of rapidly corrosive metal chips on the surface of the cladding.

The panels should be stored on a level and stable base, free from moisture. The boards should rest on polystyrene spacers, and in the case of a longer storage period and always in the summer, the packages should be protected against the effects of sunlight by covering them with a UV-resistant tarpaulin.

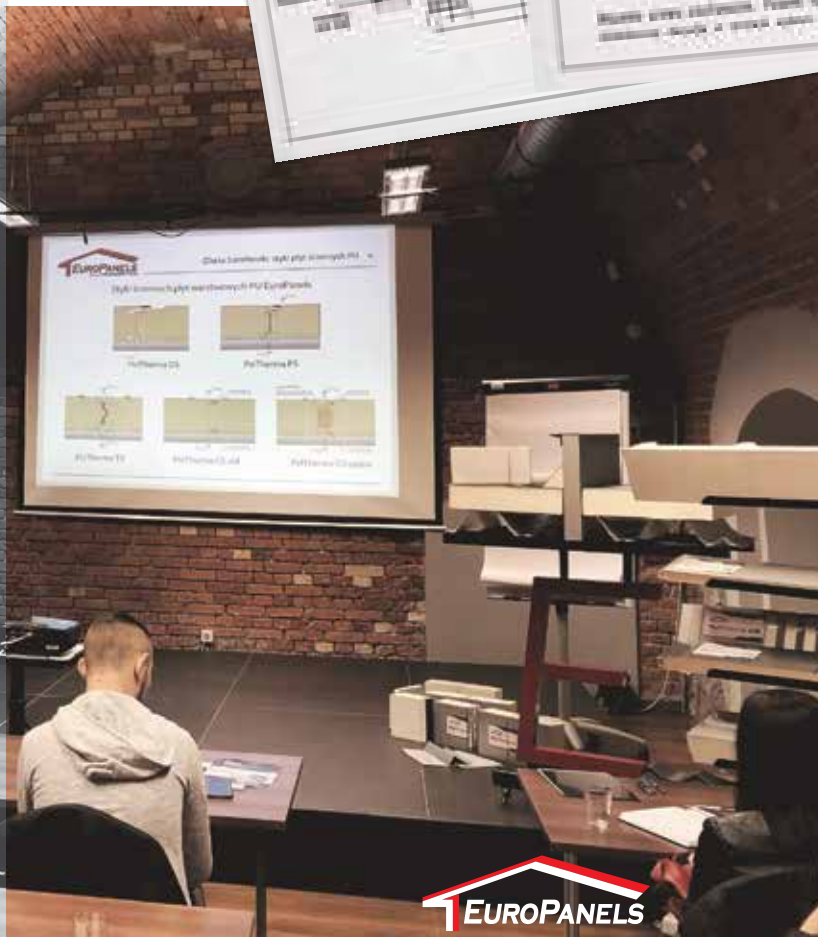
Due to the strong heating of the facade cladding, caused by the influence of sunlight, we recommend using colors from the 1st group of colors (very bright colors) and limiting the length of individual sections of the panels (optimally up to 7 m). In the case of wall panels, we recommend single-span horizontal systems, mounted on poles with a spacing of e.g. every 6 m (in the axis).

The selection of the assortment of panels and the method of assembly should match the construction design and technical parameters of the panels. It is the designer, who has the final word concerning the spacing of the supports, the characteristics of the load-bearing profiles, the loads, the number of fasteners, the final material selection, etc.

European Sandwich Panels are available to everyone. We invite you to build together with us.

The Europanel team

Well trained export team is always happy to support companies and investors all around the world.



KNOWLEDGE BASE

We provide our customers and contractors with all the information that can help them make strategic decisions in the process of designing and implementing construction using our products. Digital versions can be found on the www.europanel.pl website, while printed brochures are available from our representatives.

The materials that may be useful to you include, among others:

General terms and conditions of sale



Technical specification cards



Assembly instructions



Flashings catalogues



Certificates and attestations



Load tables



Library of details



BIM library



BEFORE YOU ORDER WALL PANELS

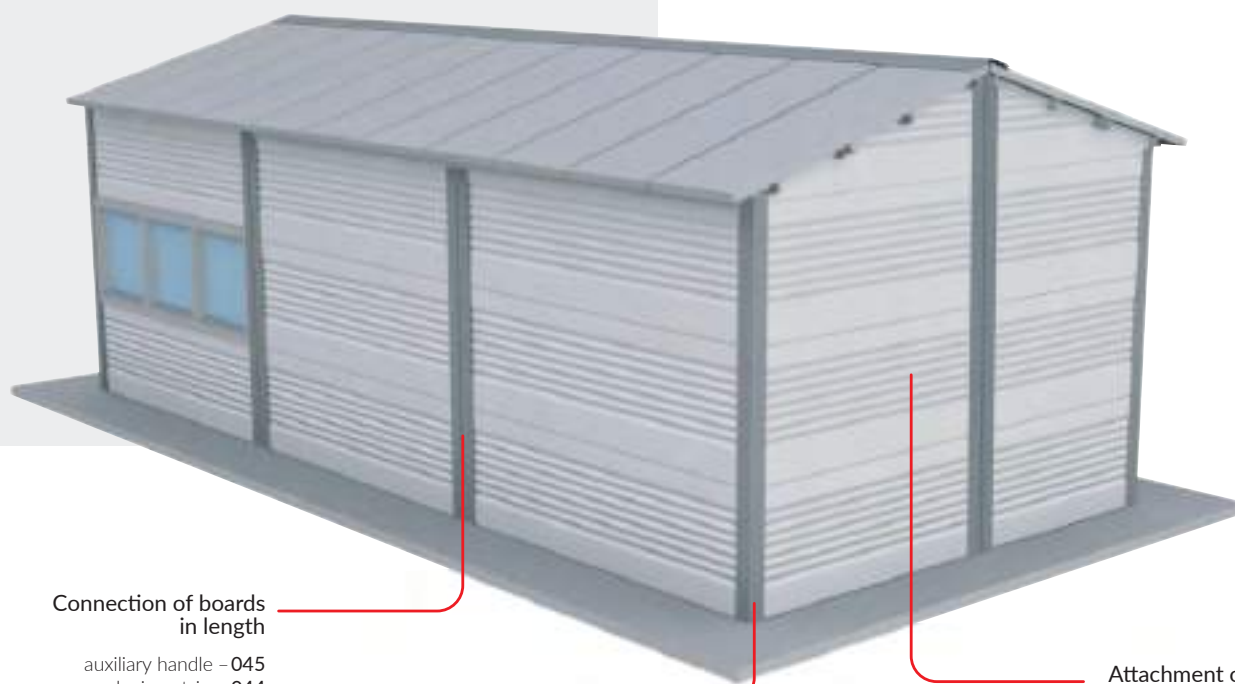
Wall sandwich panels from the Europanel offer are the perfect material for fast, cheap and lightweight hall constructions. They create architecturally interesting and functional wall facades. In order to make an appropriate selection of panels for a particular application, the following parameters should be considered:

- thermal insulation requirements (heat transfer coefficient)
- the layout of panels on the building (horizontal or vertical) and spans
- the exact length of individual panels (obligation of the ordering party)
- selection of assembly method (on your own or with the help of an assembly company)
- aesthetics - architectural concept (selection of profiling, colour, selection of accessories).

Due to the construction of sandwich panels and the variety of operating conditions, it is recommended to use as short individual sections of the panels as possible (optimally up to 7 m) and - whenever possible - to fix the panels to the structure in a horizontal single-span system.

Advantages of a horizontal, single-span system:

- better use of material - the possibility of using continuous windows without the need of panels cutting.
- optimization of technical parameters - due to structural reasons, the panels in shorter sections, operating in one span compensate very well for operating (thermal) stresses
- cheaper load-bearing structures - pillars made of steel, wood or reinforced concrete
- possibility of using lightweight structures - poles installed on feet
- simplified board assembly - only to load-bearing poles
- easier unloading and placing of boards to the structure
- no additional costs - no wall spandrel beams



Connection of boards
in length

auxiliary handle - 045
closing strip - 044
profiled gaskets

Corner Finish

auxiliary handle - 047
external angle - 046
profiled gaskets
mounting screws

Attachment of panels
to the structure

load distributor - W03
mounting screws

The traditional method of mounting the PolTherma DS wall panels provides for the use of z-sections installed to poles as elements supporting the panels.

As an alternative method of mounting, we propose to mount the panels directly on the base beam using the L support profiles mounted to the beam, used as a support structure for the panels.

An important element of the assembly is to make sure that the foundation beam on the entire surface of the assembly is even and leveled.

During installation, be sure to use horizontal insulation and an impregnated PU gasket or mounting foam filling the gap between the thermal insulation of the base beam and the beam, and the contact surface of the panels connection and the supporting structure.



It is important to maintain at least a 20 mm of distance between a panels lock and the thermal insulation of the base beam.

PolTherma DS

PREMIUM PANEL

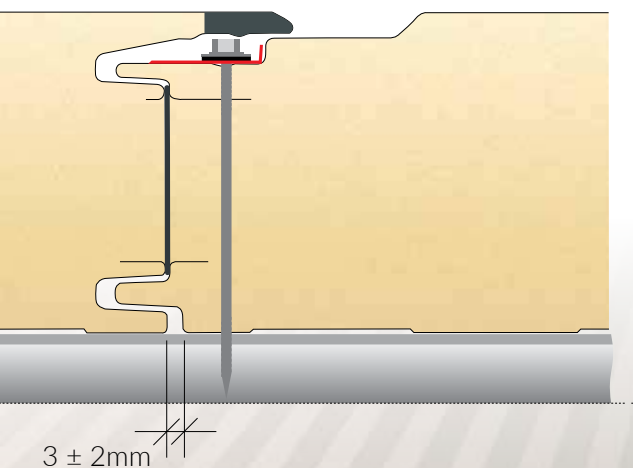




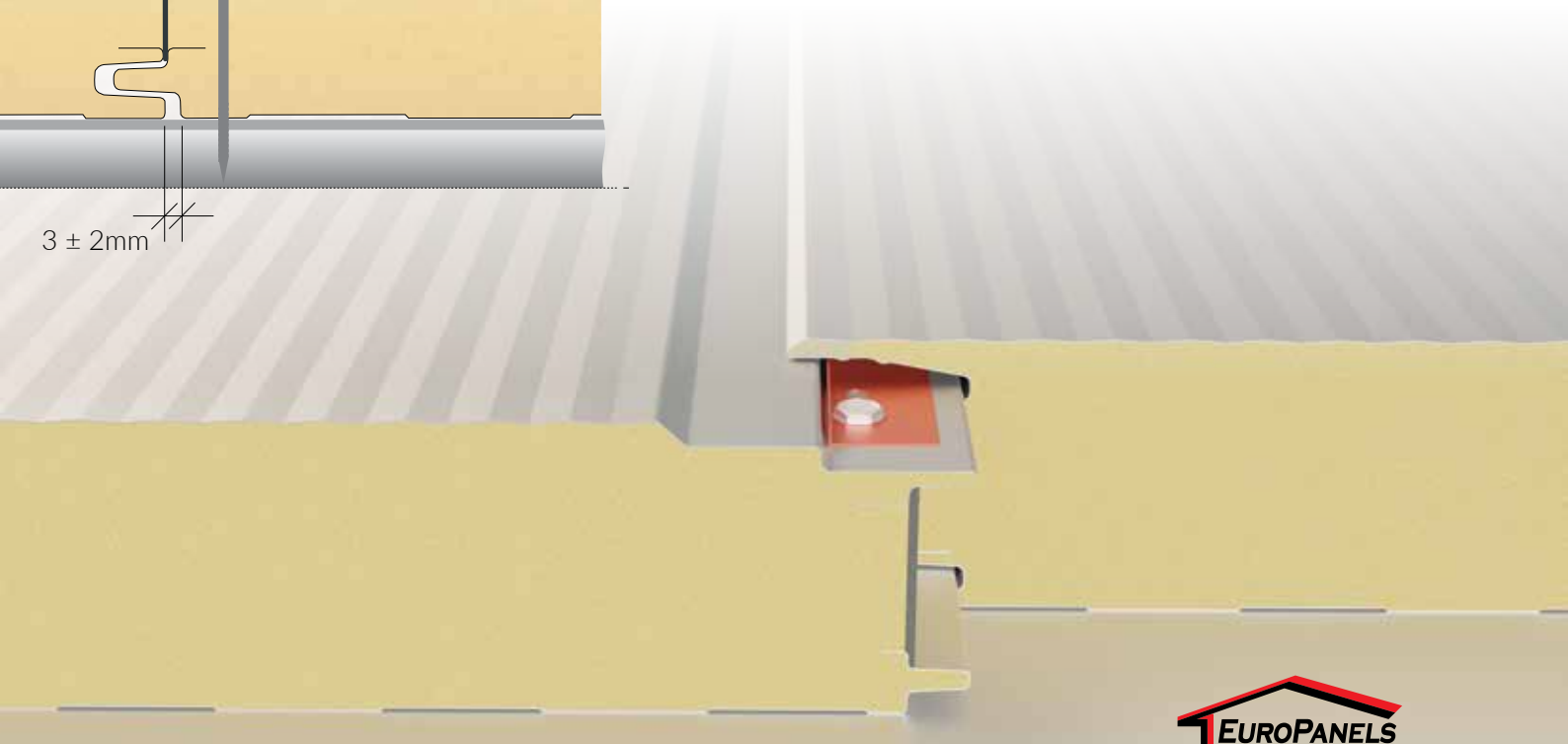
PolTherma DS

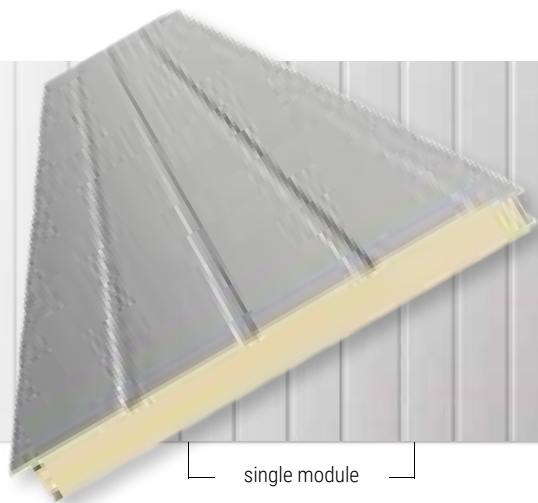
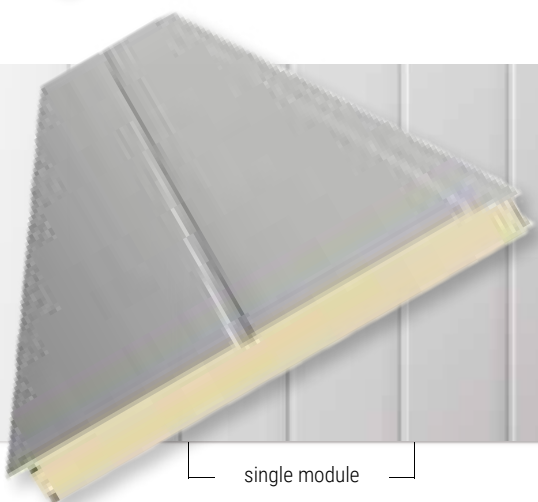
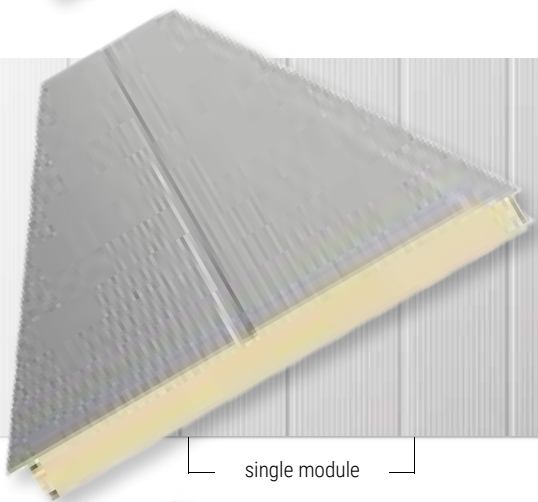
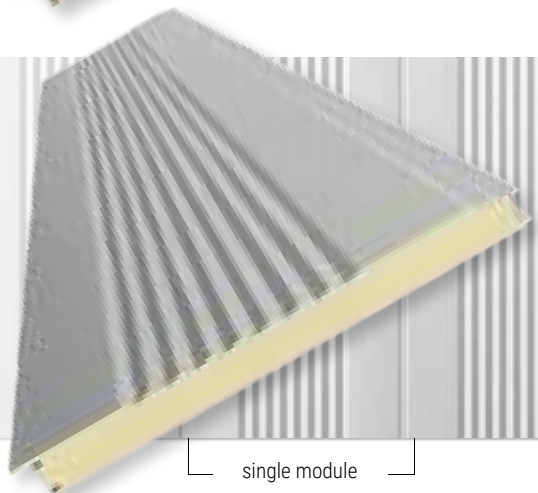
PREMIUM PANEL

PolTherma DS is a wall sandwich panel with a rigid polyurethane foam (PU) core, fixed to the supporting structure in an **invisible way** (the so-called hidden contact). To fix it, a special washer and screws are necessary, which are covered by the overlapping plate at the time of its connection. In this way, the facade of the building is free of any visible fastenings, presenting a coherent sheet of elegant embossing.



Panel cross-section				
1025 mm				
Available panel thicknesses [mm]				
60	80	100	120	160
Thermal conductivity coefficient λ_D [W/(m·K)]				
0.022				
Heat transfer coefficient $U_{d,s}$ for S profiling [W/(m²·K)]				
0.46	0.32	0.25	0.20	0.15
Heat transfer coefficient $U_{d,s}$ for MK profiling [W/(m²·K)]				
0.44	0.31	0.24	0.20	0.15
Weight 1 m² [kg]				
11.5	12.3	13.0	13.8	15.3
Maximum number of panels per package [pcs.]				
18	14	11	9	7



**Cassette**
K250**Cassette**
K500**Cassette-micro**
MK500**Slanting**
S

PolTherma PS



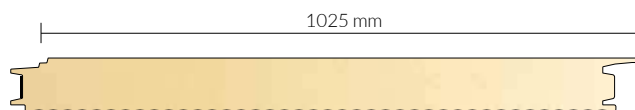


PolTherma PS

PolTherma PS is a wall sandwich panel with a rigid polyurethane foam (PU) core, fixed to the supporting structure in an **invisible way** (the so-called hidden contact). The PS board is a very popular product that is appreciated by customers, who require a high aesthetic with standard profiling.

Unlike other PU wall boards with a hidden contact from our offer, the toe covering the connection of **PolTherma PS** boards overlaps the next board without a visible connection. Such a design makes it possible to achieve a uniform sheet of elegant embossing on the entire facade.

Panel cross-section



Available panel thicknesses [mm]

60	80	100	120	160
----	----	-----	-----	-----

Thermal conductivity coefficient λ_b [W/(m·K)]

0.022

Heat transfer coefficient $U_{d,s}$ [W/(m²·K)]

0.39	0.29	0.23	0.19	0.14
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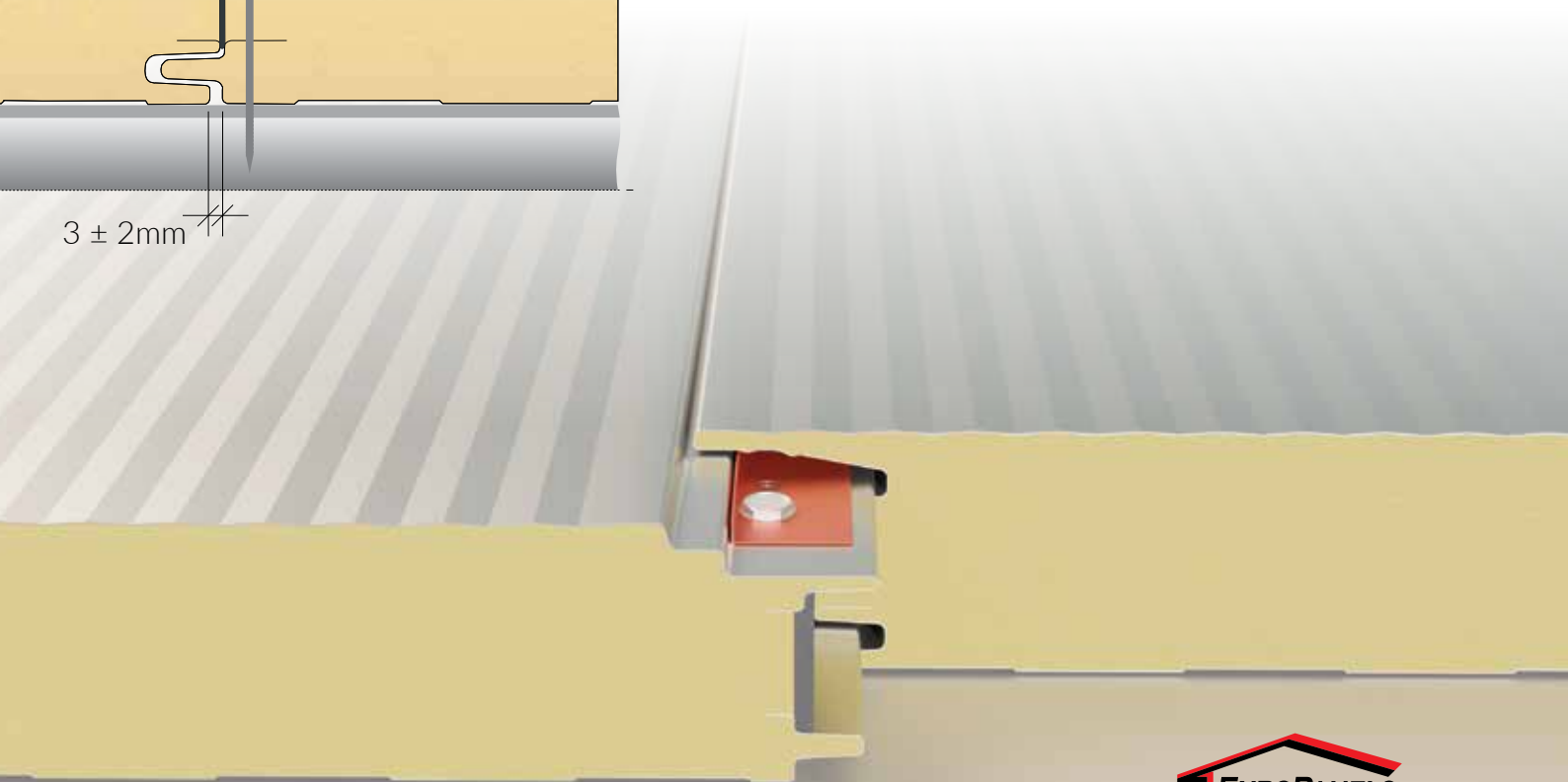
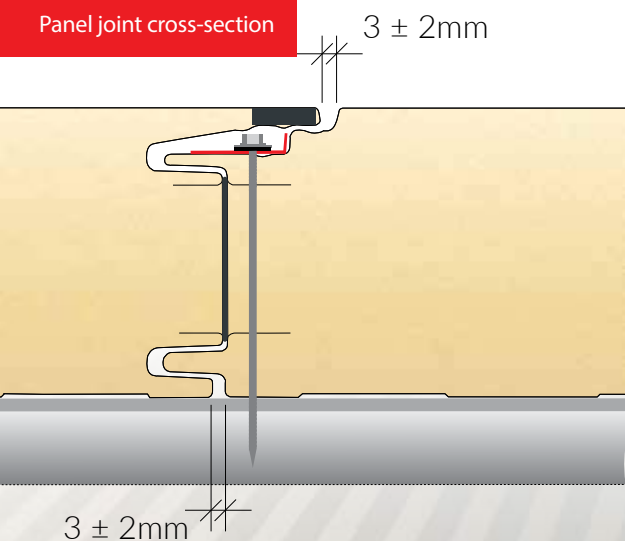
Weight 1 m² [kg]

11.5	12.3	13.0	13.8	15.3
------	------	------	------	------

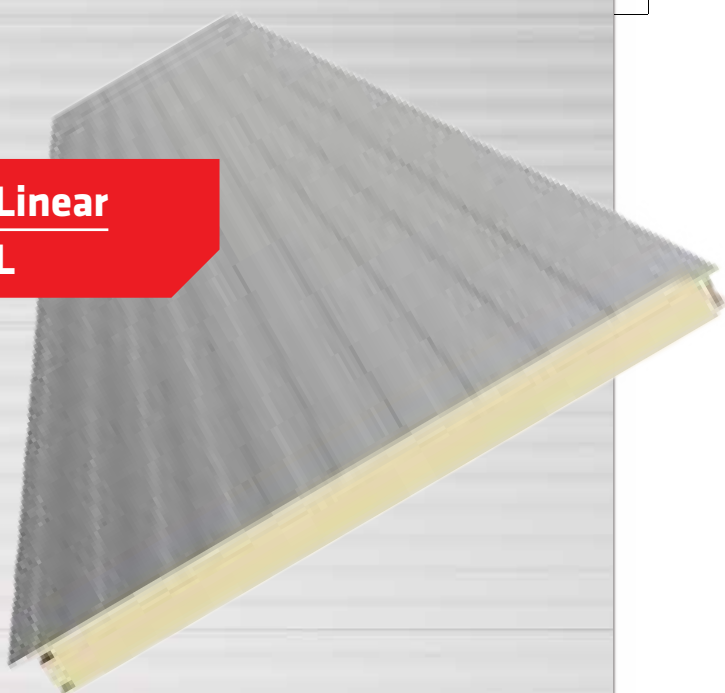
Maximum number of panels per package [pcs.]

18	14	11	9	7
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Panel joint cross-section



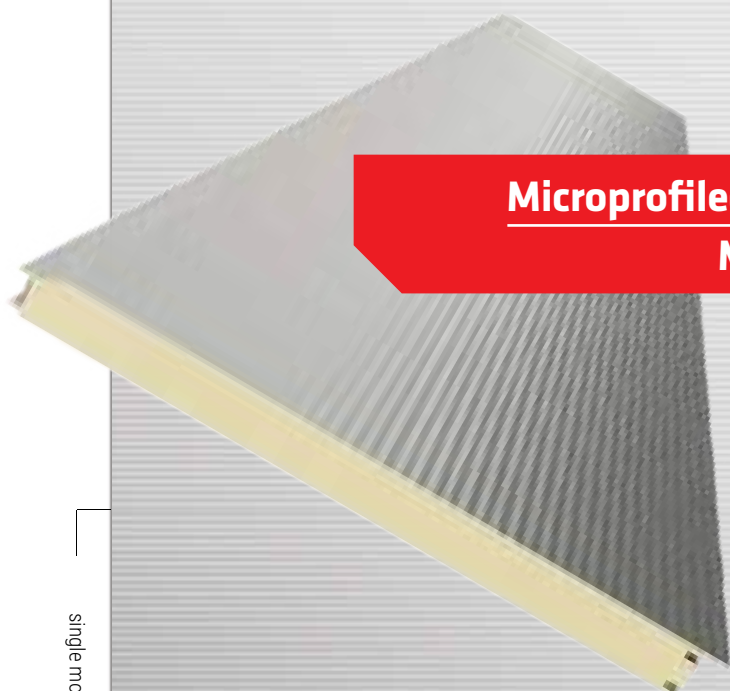
Linear
L



single module

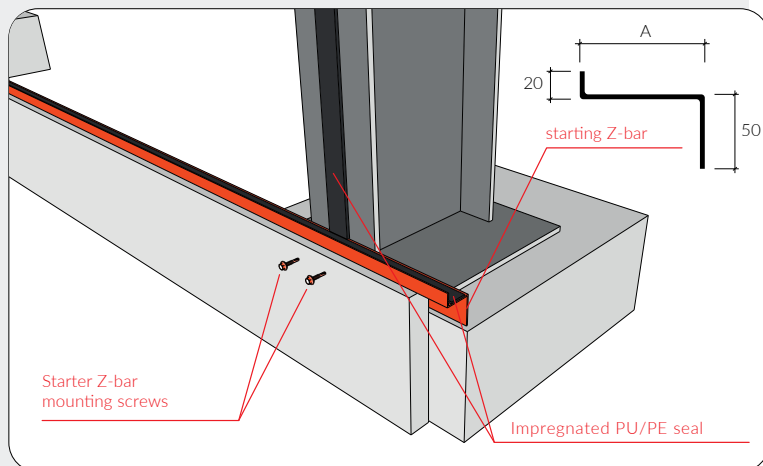
single module

Microprofiled
M



1. PREPARATION FOR PANELS ASSEMBLING

1.1. Selection and installation of the starting Z-bar



With horizontal panel layout, there are no casing bolts. The panels are attached to the outer shelf of the main load-bearing columns, through both facings. In order to create a stable starting base for the first panel, it is recommended to use a starting Z-bar. The Z-bar is individually matched to the thickness and type of the panel.

Dimensions of starting z-bar:

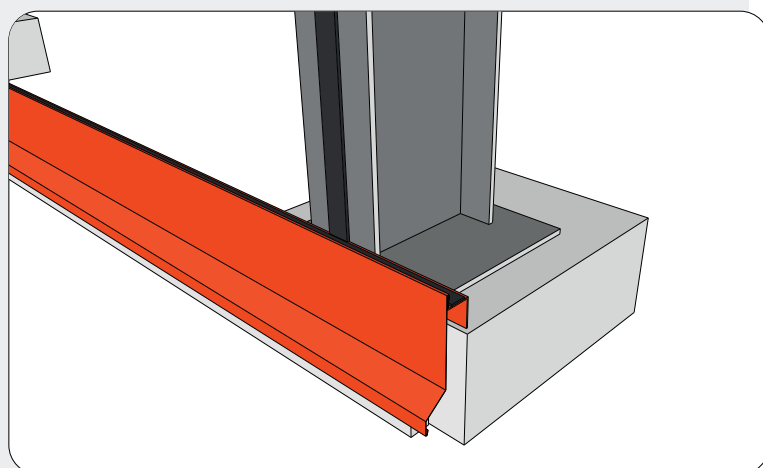
PolTherma DS/PS	
Panels thickness D [mm]	A [mm]
50	32
60	42
80	62
100	82
120	102
160	142

PolTherma TS/CS	
Panels thickness D [mm]	A [mm]
40	32
50	42
60	52
80	72
100	92
120	112
160	152
200	192

The Z-bar is usually made of 2.0 mm thick sheet metal, available as standard in 6 m lengths.

The Z-bar is fastened with screws to posts, concrete blocks, plinth edges, etc., depending on the type of substrate. It should be a continuous line along the entire length of the wall. After installation, a PU or PE impregnated seal is glued to the horizontal shelf of the Z-bar.

1.2. Installing the plinth strip 053

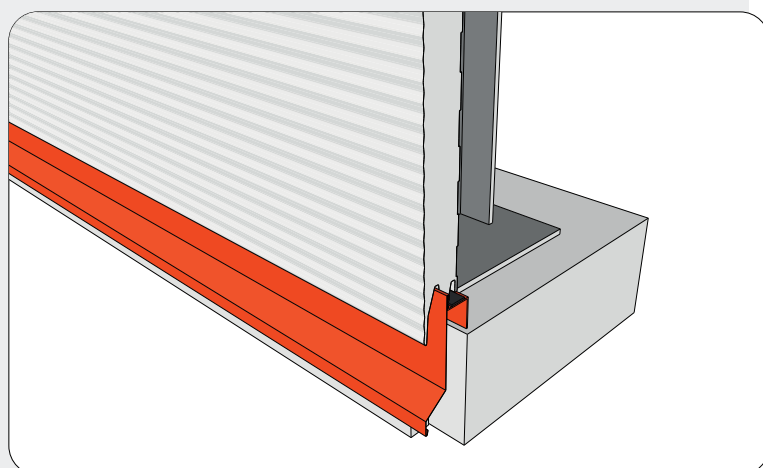


The proposed solution includes sheet metal flashing 053 (base strip), which ensures water drainage from the façade beyond the foundation (foundation strip, base). This is especially important when thermal insulation of the base is used. In this way, the substrate is protected from excessive moisture from rainwater. The flashing 058a for TS(X)/CS(X) panels or 058b for DS/PS panels is applied to the vertical edge of the starting Z-bar. This flashing is not mechanically fastened. The overlap at the connection of individual sections is minimal (it is best to process/cut off only the upper edge of the strip and insert it) or there is no overlap at all.

NOTE:

In the case of TS(X)/CS(X) plates, in the joint of the first plate to be placed on the starting profile, the "bellies" must be cut off from the PU core to level the contact surface with the profile.

1.3. Placing the wall panel on the Z-shaped profile with flashing

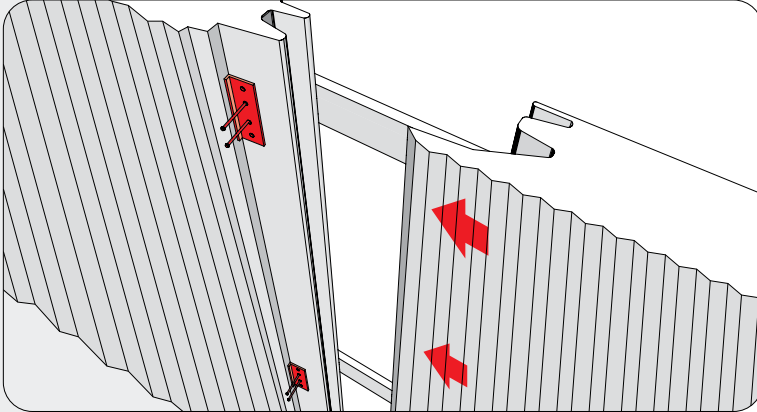


The wall panels end up with an external groove on the edge of the Z-shaped profile with processing and are mechanically fastened to the supporting columns with self-drilling screws.

TS(X)/CS(X) panels are recommended to be fastened through both coverings using at least 2 screws per side (3 pcs. in corners), i.e. 4 pcs. (6 pcs. in corners) per panel. DS/PS panels are normally fastened using a set of washers called load distributors and 2 pcs. screws per washer at the fastening point. However, with a small width of the support shelf on the column, DS./PS panels can alternatively be fastened similarly to TS(X)/CS(X) panels, but the fasteners should be placed in the full thickness of the panels (not in shallow embossments).

2. ASSEMBLING PANELS FROM DS AND PS SERIES TO STEEL STRUCTURE

2.1. Fastening of panels with hidden fixing - horizontal layout - PolTherma DS i PS

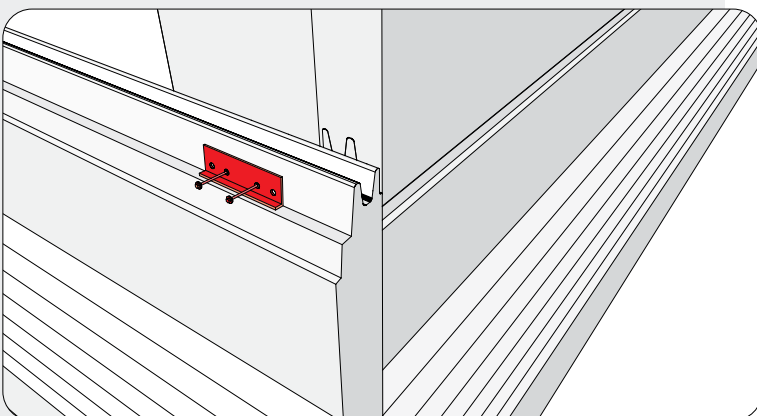


Installation of all types of hidden fixing wall panels requires a special washer, a so called Load Distributor and 2 joints in the fixing point. In the case of a vertical layout, a fulcrum is a horizontal supporting beam. Before installation panels, it's necessary to remove the protective film, because it covers the whole area of the panel, including the joint. It will be impossible to take it off later.

After the alignment of the first panel, the point of attachment for load distributor is specially profiled edge of the panel, where you need to put the load distributor. Then fasten the panel with appropriate self-drilling screws from Europanles' accessories offer.

Another panel covers by its nose all the fastening point of former one, so it is necessary to press closely the panel to fully connect joint. Finally, attach the distributor on the other side of a panel and fasten as above.

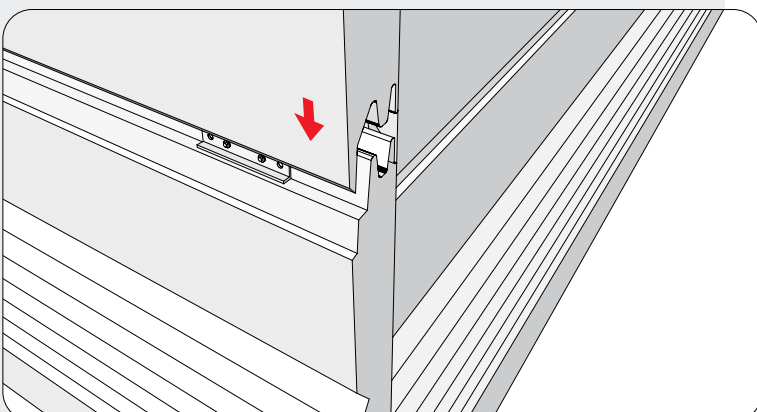
2.2. Fastening of the panels with hidden fixing - vertical layout - PolTherma DS i PS



Installation of all types of hidden fixing wall panels requires a special washer, a so called Load Distributor and 2 joints in the fixing point. In the case of a vertical layout, a fulcrum is a horizontal supporting beam. The load distributor is an angle bar with some holes. The distance between the holes lets to secure the panel to different types of sections. Each distributor should be secured with two fasteners. Before installation panels, its necessary to remove the protective film, because it covers the whole area of the panel, including the joint. It will be impossible to take it off later.

Distributor together with the fasteners should be placed into outer groove of the panel. Thanks to shape of nose of the adjacent panel, heads of the fasteners are not visible on a facade.

2.3. Installation of following panels



It is important to secure the first panel in a proper and accurate way because it makes the basic line for the next panels.

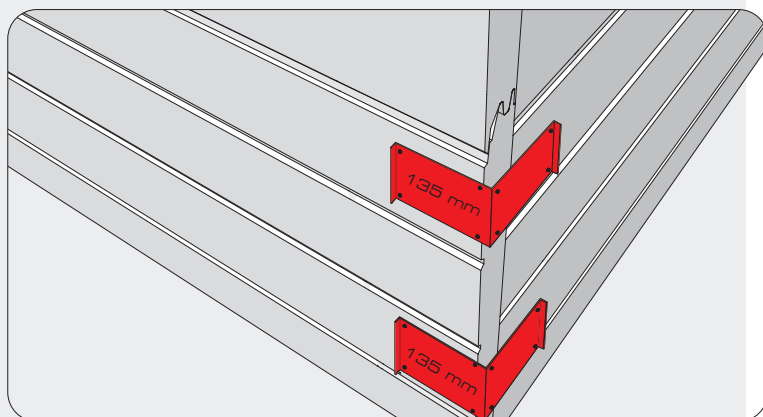
When the first panel is secured to the column the next one could be installed (tongue-groove connection).

Be sure that the next panel is secured in a correct way and its load is taken completely by the former one. If so, you can secure the next panel.

3.3. NEW GENERATION CORNER FLASHING 046 ASSEMBLY

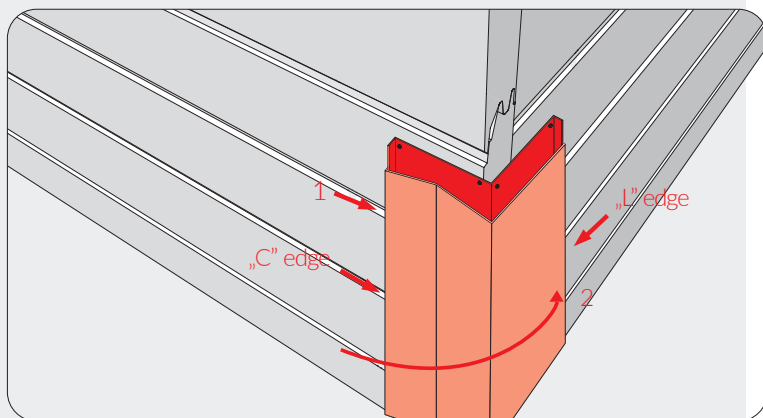
The new generation corner Europanels flashing with concealed fixings have been developed primarily for aesthetic finishing corners of buildings made of sandwich panels mounted horizontally.

3.1. Auxiliary brackets (base) 047



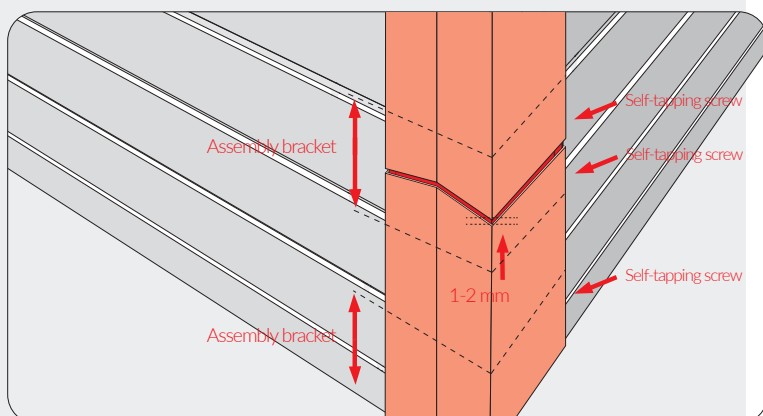
After attaching sandwich panels to the structure, corner flashing installation starts from arrangement, leveling and screwing auxiliary brackets 047 to the panel cladding. They have one fixed dimension (135mm) and the second is variable, depending on the thickness of the wall panels used at the facility. If the panels come to the front in the corner (are not cut at an angle of 45), the fixed-dimension side should be at the panel without the joint, and the second (variable) should go beyond the panels' joint. Per 1 piece of outer finishing 046 with the length of 2.5 m, 4 pieces of brackets 047 should be used. Distance between the brackets: one on each end of the finishing, and the other two at a distance of 1 m from each other. In the case of end brackets, they are to be visible after embedding flashings. Only the starting flashing should face the bracket at the bottom (as the end on from the top). Auxiliary brackets are mounted to the cladding with self-tapping screws or farmers. Per one bracket, four jigs placed in the corners are used, at a distance of about 25mm from the edge of the bracket

3.2. Corner angle assembly 046



After such preparation of mounting brackets, you can install the outer angle 046. One flashing edge (profiled) is bent into the shape of the letter "C", the second (variable, non-profiled) in the shape of the letter "L". First, place the "C" edge into the gap between the cladding and the sandwich panel auxiliary bracket (step 1), then adjust the flashing in such a way as to keep 1mm space between the edge of the flashing and the panel flashings at the other side (step 2). During flashing assembly, pay attention to the sharp "12 edge. Be careful to avoid any body cuts and scratches on the sandwich panel cladding.

3.3. Final assembly



Flashings of this type are not intended for overlapping connection alongside the panel. For this reason, they are symmetric, and at the place of the connection, a gap with the width of about 2mm must be maintained. Flashing 046 is mounted on the iiri side with mini self-tapping screws or sealed steel rivets to the profiled element of bracket 047 at four locations, i.e. one self-tapping screw on each auxiliary bracket of the given flashing. During installation, pay attention not to scratch the cladding of the sandwich panel during drilling /screwing.

PolTherma TS

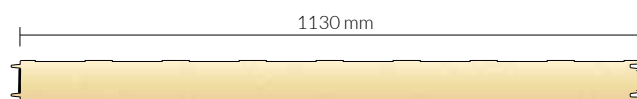


PolTherma TS

PolTherma TS is a wall sandwich panel with a rigid polyurethane foam (PU) core, fixed to the supporting structure with a fastener passing through the entire thickness of the board (through). Its main advantages are the simplicity of assembly, a very favorable coverage width (1130 mm) and the use of a special gasket in the joint, improving the tightness of the connection.

PolTherma TS panels can be installed both horizontally and vertically to various supporting structures: steel, wooden or reinforced concrete.

Panel cross-section



Available panel thicknesses [mm]

40	60	80	100	120	160	200
----	----	----	-----	-----	-----	-----

Thermal conductivity coefficient λ_D [W/(m·K)]

0.022

Heat transfer coefficient $U_{d,s}$ for M,R,L profiling [W/(m²·K)]

0.62	0.39	0.29	0.23	0.18	0.14	0.11
------	------	------	------	------	------	------

Heat transfer coefficient $U_{d,s}$ for MK550 profiling [W/(m²·K)]

0.75	0.44	0.31	0.24	0.20	0.15	0.12
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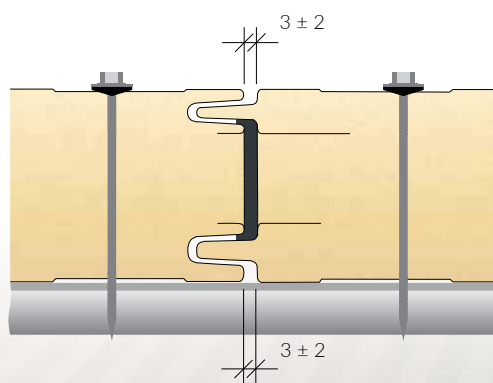
Weight 1 m² [kg]

10.4	11.2	11.9	12.7	13.5	15.1	16.5
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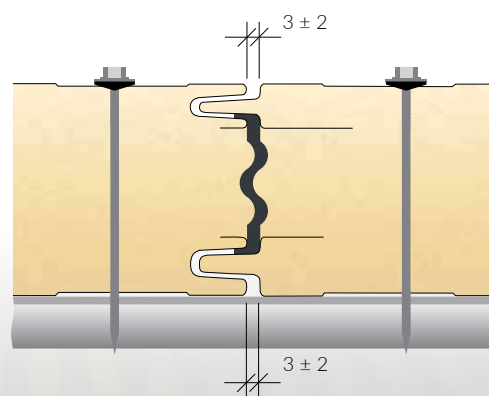
Maximum number of panels per package [pcs.]

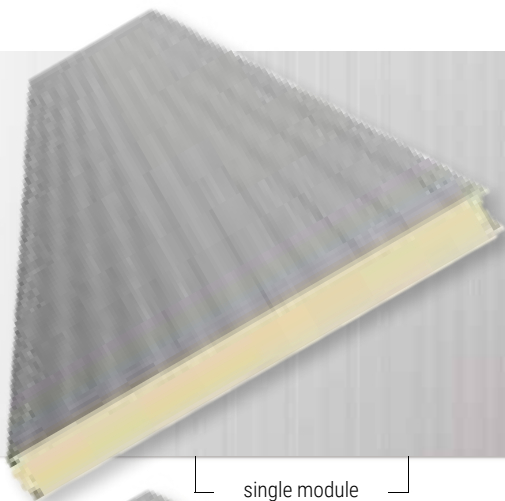
28	18	14	11	9	7	5-6
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Cross-section of the panels' joint with a thickness of 40-80mm



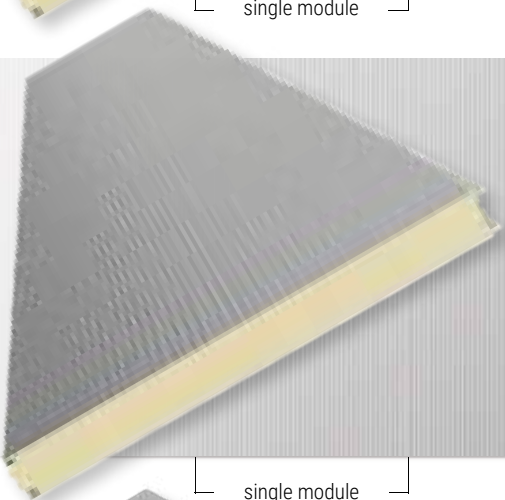
Cross-section of the panels' joint with a thickness of 100-200mm





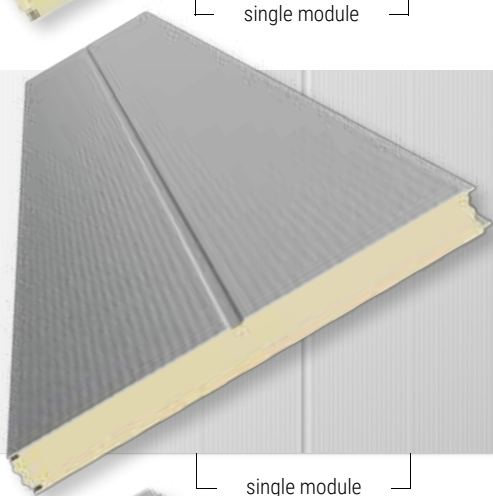
single module

Linear
L



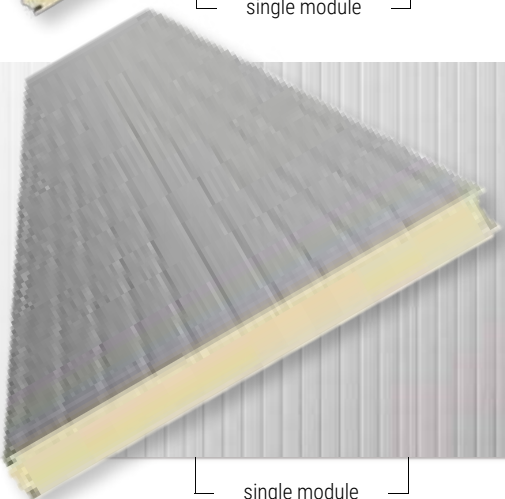
single module

Microprofiled
M



single module

MK 550

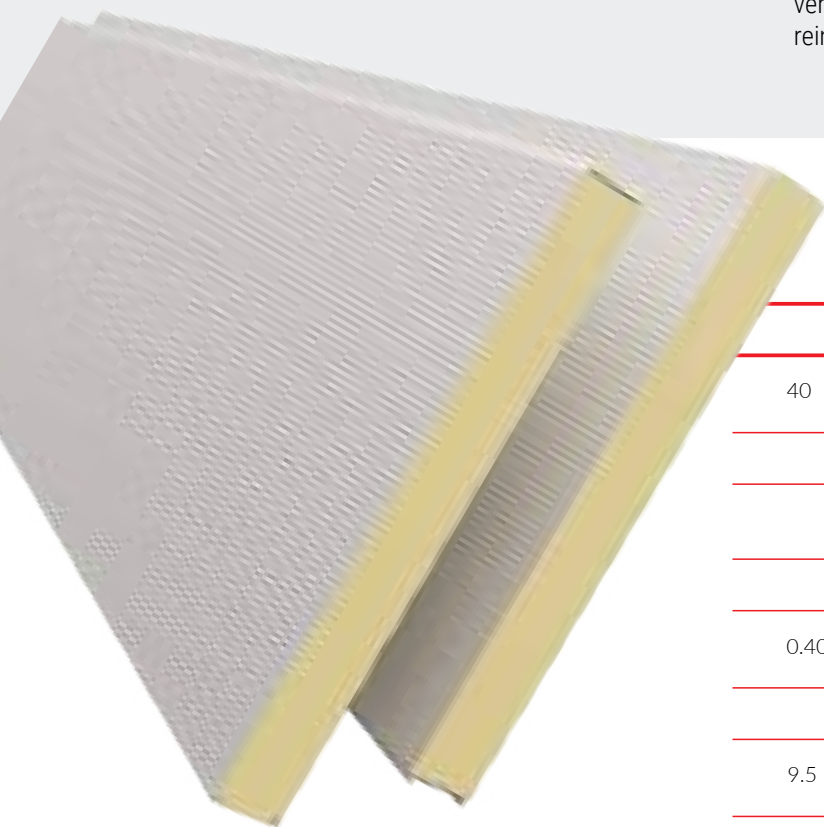


single module

Grooved
R

PolTherma TS X

NEW



PolTherma TS X is a wall sandwich panel with a core of rigid polyurethane foam (PU), attached to the supporting structure using a connector passing through the entire thickness of the panel (through-hole). Its main advantages are the simplicity of assembly, a very favourable coverage width and the use of a special seal in the joint, improving the tightness of the connection.

PolTherma TS X panels can be mounted both horizontally and vertically to various supporting structures: steel, wooden or reinforced concrete.

Available panel thicknesses [mm]

40	60	80	100	120	140	160	180	200
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Thermal conductivity coefficient λ_D [W/(m·K)]

0.022

Heat transfer coefficient $U_{d,s}$ for L, M, SM profiling [W/(m²·K)]

0.40	0.35	0.26	0.21	0.18	0.15	0.13	0.12	0.11
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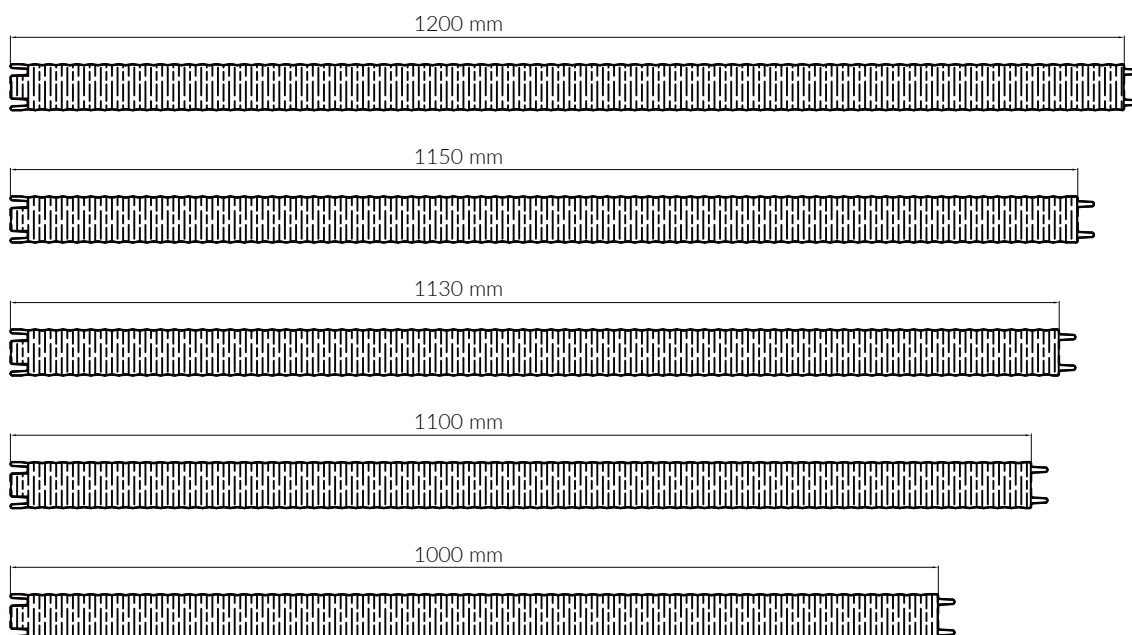
Weight 1 m² [kg]

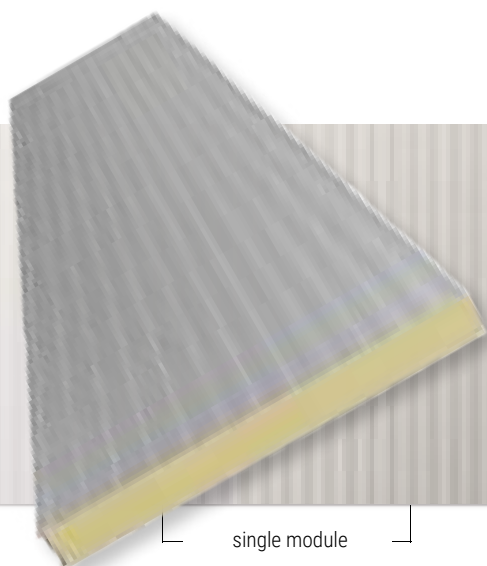
9.5	10.3	11.0	11.8	12.6	13.3	14.1	14.8	15.6
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Maximum number of panels per package [pcs.]

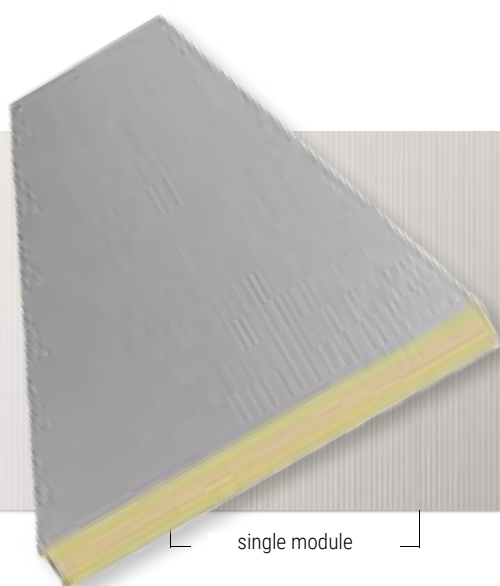
28	18	14	11	10	9	7	6	5-6
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Modular width

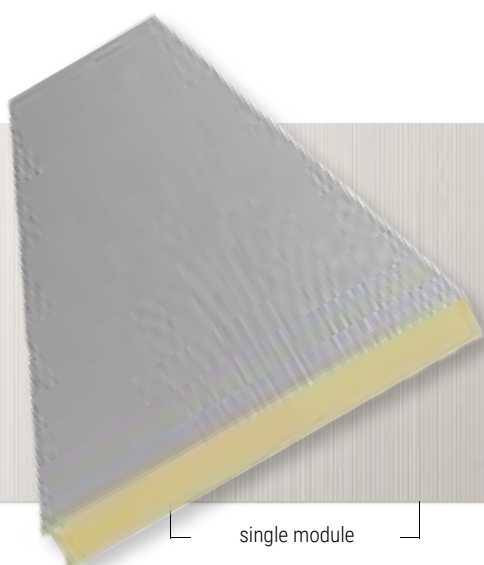




Linear
L



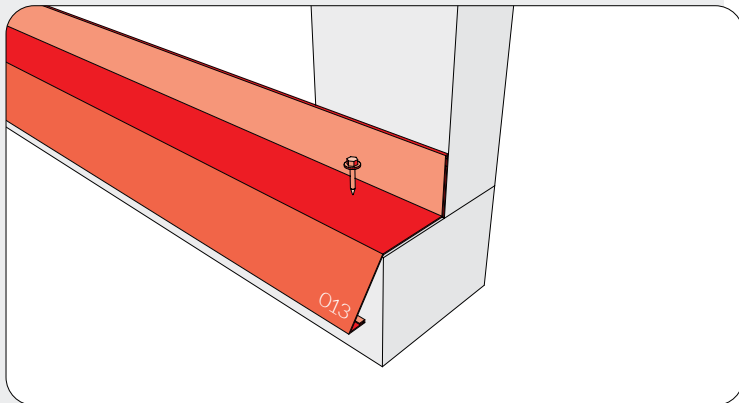
Microprofiled
M



Super-micro
SM

1. INSTALATION OF PANELS ON CONTINUOUS FOUNDATION

1.1. Securing the starting flashing - 013

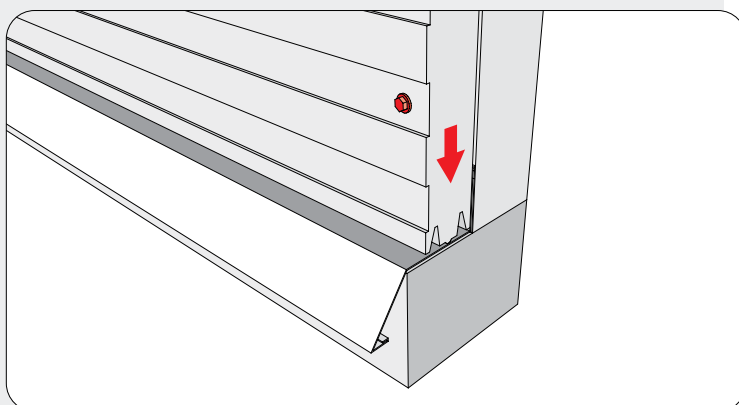


In traditional solutions there is a continuous foundation between the columns which is used as a base for panels securing both horizontally and vertically.

Check whether a continuous foundation is flat. If it is not, compensate the surface by a professional free proof mass.

If the continuous foundation surface is flat put a strip 013 and then secure it with EuroPanels fasteners.

1.2. Securing the first panel

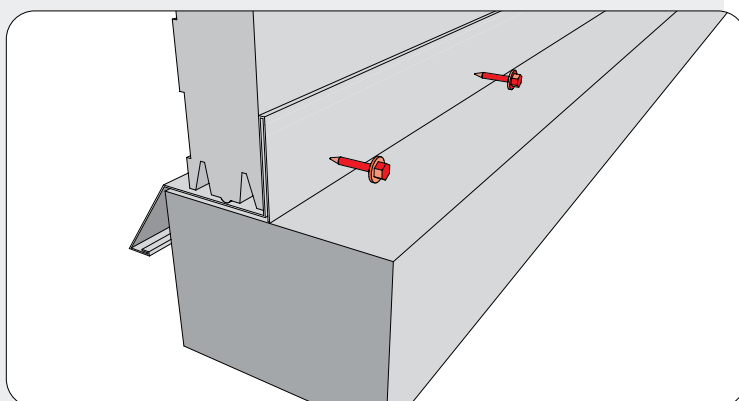


If the strip 013 is properly secured to the continuous foundation the first / lowest panel could be placed on it. It is important to secure it in a proper and accurate way (leveling), because the next panels will follow the former one and the faults and inaccuracies will increase.

Panel should be secured to the structure with the fasteners according to the panel thickness and the type and thickness of the structure. They should be located about 40-50 mm from panels edge.

Before installation make sure that acoustic tape is attached to construction.

1.3. Securing the strip 013



The inner flashing 013 should be secured with the EuroPanels fasteners. The distance between the fasteners should be about 300 mm.

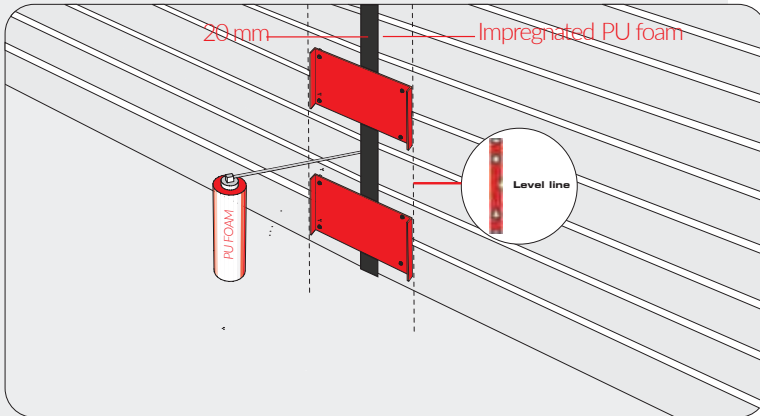


TIP: Use the dynamometer equipment for the best and safe securing of fasteners.

2. NEW GENERATION MASKING FLASHING 044 ASSEMBLY

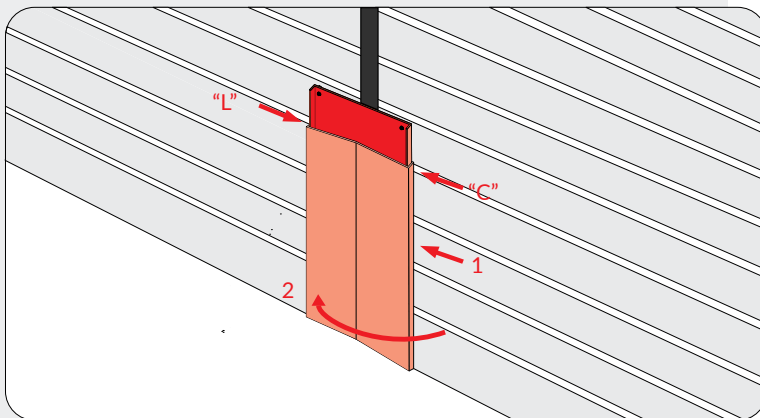
The new generation of Europanels flashing with concealed fixing is designed for modern and aesthetic closing the wall panel joints alongside, they are mounted to the load bearing columns in horizontal single-span system. The main advantage are no visible fixing elements, which perfectly harmonizes, especially, with the PolTherma DS series of decorative wall panels.

2.1. Auxiliary brackets (base) 045



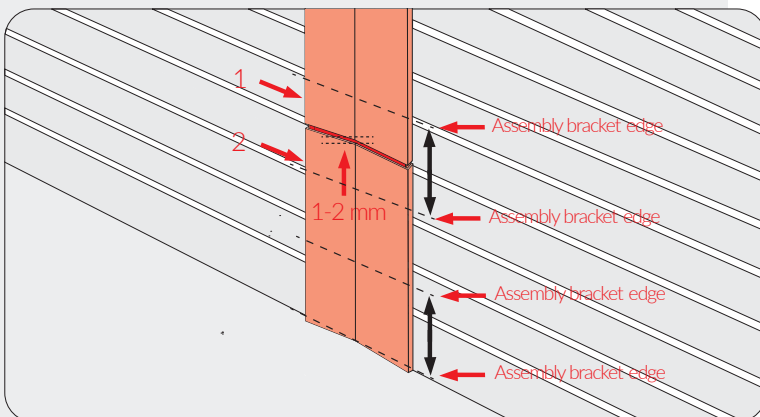
After fixing the panels to the columns (20mm expansion gap is required to be preserved and filled with low pressure assembly foam, onto which a strip of adhesive impregnated PU foam is glued), auxiliary brackets should be arranged, leveled and screwed to the panel cladding (base) 045. Per 1 piece of finishing with the length of 2.5 m, 4 pieces of brackets should be used. Distance between the brackets: one on each end of the finishing, and the others at a distance of 1 m from each other. In the case of end brackets, they are to be visible after embedding flashings. Only the starting flashing at the bottom and the end flashing at the top can cover the brackets. Auxiliary brackets are mounted to the cladding with self-tapping screws or farmers. Per one bracket, four jigs placed in the corners are used, at a distance of about 25mm from the edge of the bracket.

2.2. Masking flashing (strip) installation 044



After such preparation of mounting brackets, you can install the masking strip 044. One flashing edge is bent into the shape of the letter "C", the second in the shape of the letter "L". First, place the "C" edge into the gap between the sandwich panel cladding and the auxiliary bracket (step 1), then adjust the flashing in such a way as to keep 1mm space between the edge of the flashing and the panel cladding (step 2). During flashing assembly, pay attention to the sharp "L" edge. Be careful to avoid any body cuts and scratches on the sandwich panel cladding

2.3. Final assembly



Flashings of this type are not intended for overlapping connection alongside the panel. For this reason, they are symmetric, and at the place of the connection, a gap with the width of about 2mm must be maintained. Flashing 044 is mounted on the "L" side with mini self-tapping screws or sealed steel rivets to the profiled element of bracket 045 at four locations, i.e. one self-tapping screw on each auxiliary bracket. During installation, pay attention not to scratch the cladding of the sandwich panel during drilling / screwing.

PolTherma CS





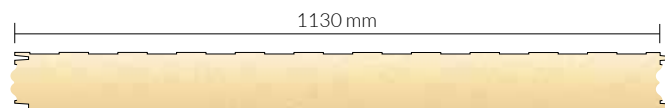
PolTherma CS

PolTherma CS is a specialized sandwich panel with a rigid polyurethane foam (PU) core for refrigeration applications. It is fixed to the supporting structure with a fastener (we recommend stainless steel fasteners), passing through the entire thickness of the board. In addition to its application in refrigeration, this board will work wherever the most important factor is to thermally insulate the walls.

PolTherma CS is especially recommended in the food industry and agricultural buildings, as a wall construction or in the form of a suspended ceiling, e.g. in fruit and vegetable storage rooms, freezers, cold stores, butchers or slaughterhouses.

For facilities with very low temperatures, 100% insulation tightness will be ensured by a joint flooded with polyurethane applied on site. This allows to achieve measurable savings resulting from reduced electricity consumption.

Panel cross-section



Available panel thicknesses [mm]

120	160	200
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Thermal conductivity coefficient λ_0 [W/(m·K)]

0.022

Heat transfer coefficient $U_{d,s}$ for L, M, R profiling [W/(m²·K)]

0.18	0.14	0.11
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Heat transfer coefficient $U_{d,s}$ for MK550 profiling [W/(m²·K)]

0.20	0.15	0.12
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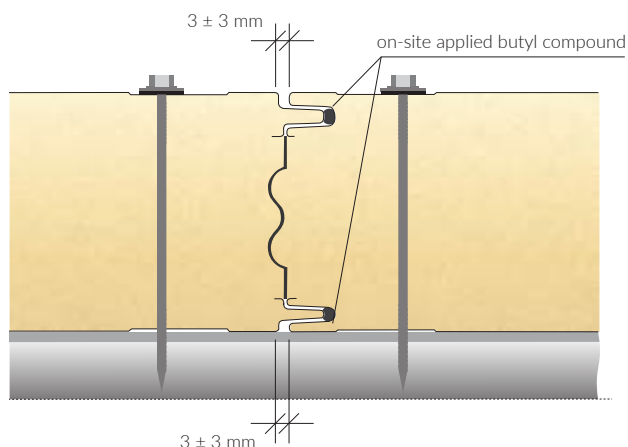
Weight 1 m² [kg]

13.4	14.9	16.5
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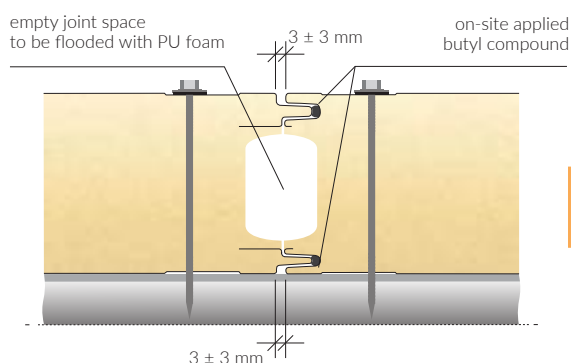
Maximum number of panels per package [pcs.]

9	7	5-6
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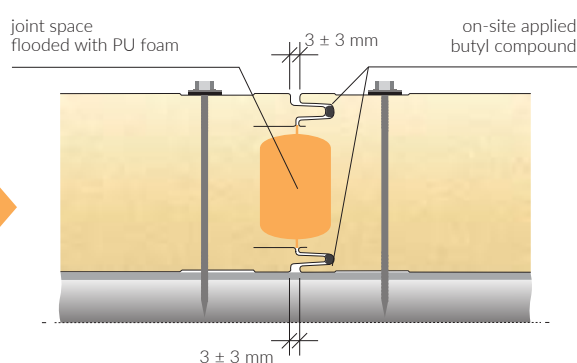
Panel joint cross-section - standard

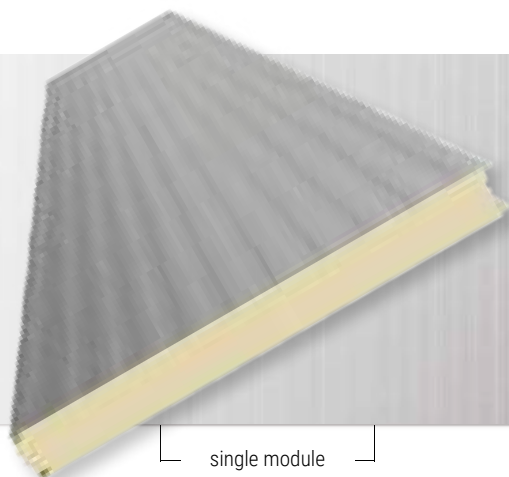


Panel joint cross-section - PU flooded contact



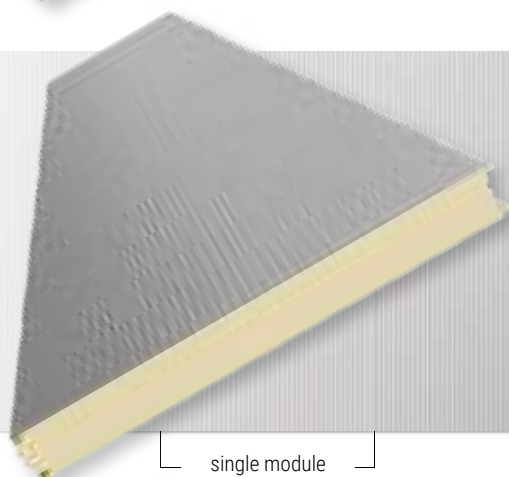
After PU foam flood





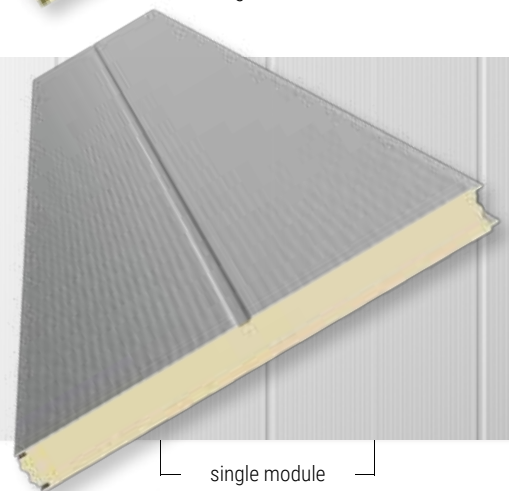
single module

Linear
L



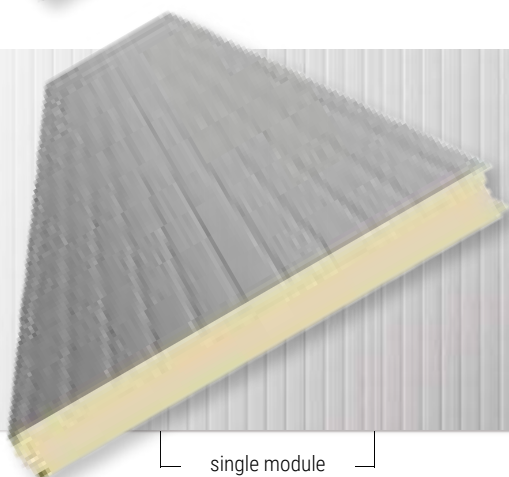
single module

Microprofiled
M



single module

MK 550

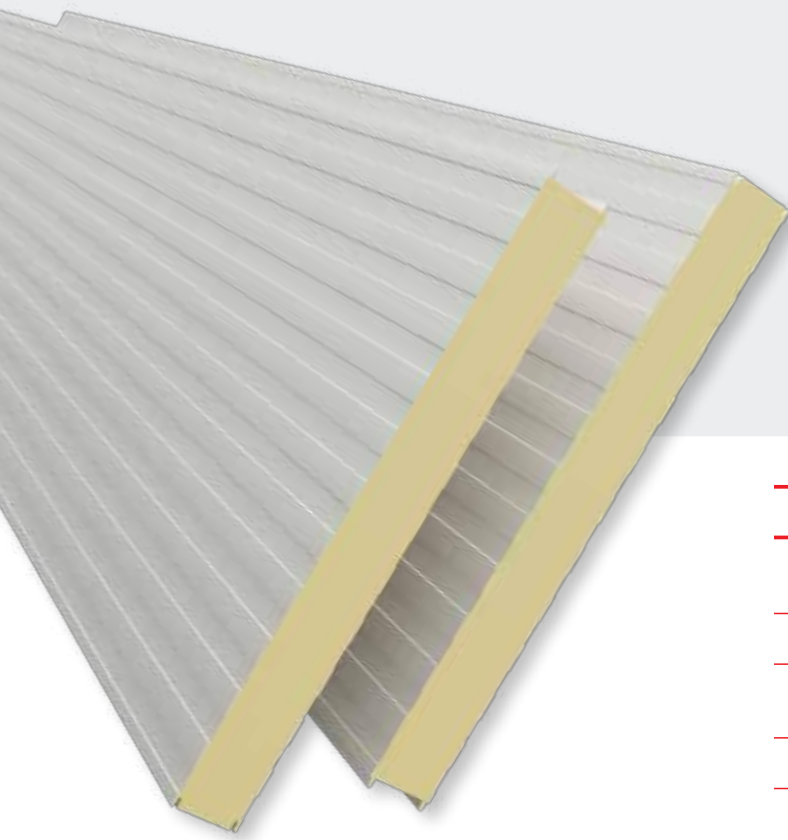


single module

Grooved
R

PolTherma CS X

NEW



PolTherma CS X is a specialized sandwich panel with a core of rigid polyurethane (PU) foam for refrigeration applications. It is attached to the supporting structure using a connector (we recommend stainless steel), passing through the entire thickness of the panel. Apart from refrigeration applications, this panel will work well wherever thermal insulation of walls is most important.

The **PolTherma CS X** panel is particularly recommended in the food industry and agri-construction, as a wall structure or in the form of a suspended ceiling, e.g. in fruit and vegetable stores, freezers, cold stores, butcher shops or slaughterhouses.

For facilities with very low temperatures, 100% insulation tightness will be ensured by a polyurethane-filled joint applied on the construction site. This allows measurable savings resulting from reduced electricity consumption.

Available panel thicknesses [mm]

120	140	160	180	200
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Thermal conductivity coefficient λ_0 [W/(m·K)]

0.022

Heat transfer coefficient $U_{d,s}$ for L, M, SM profiling [W/(m²·K)]

0.18	0.15	0.13	0.12	0.11
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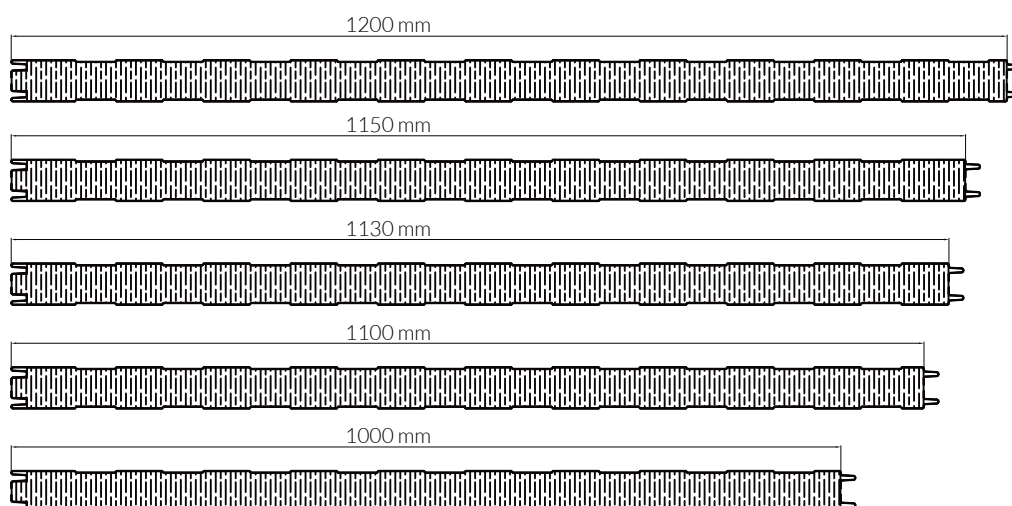
Weight 1 m² [kg]

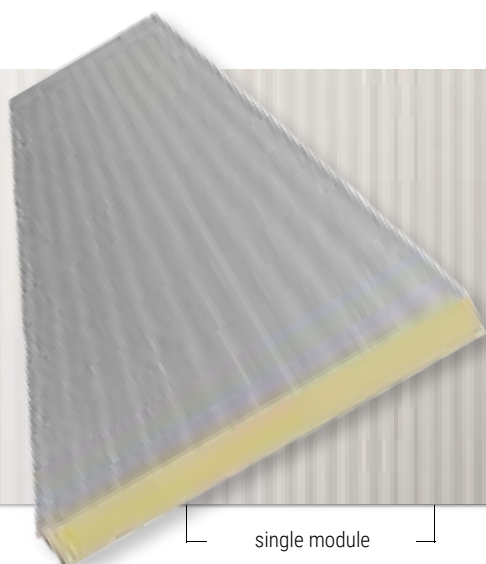
12.6	13.3	14.1	14.8	15.6
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Maximum number of panels per package [pcs.]

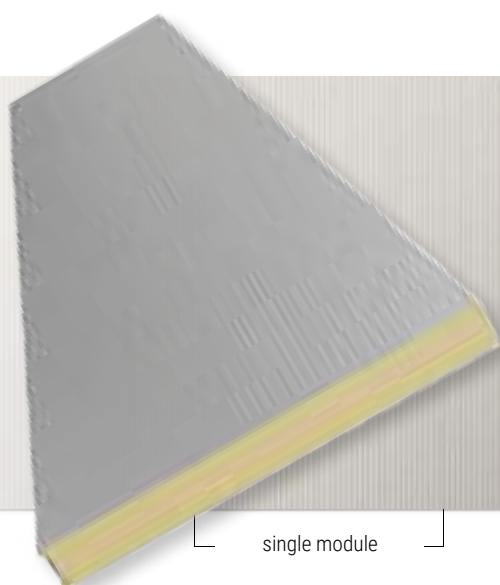
9	9	7	6	5-6
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Modular width

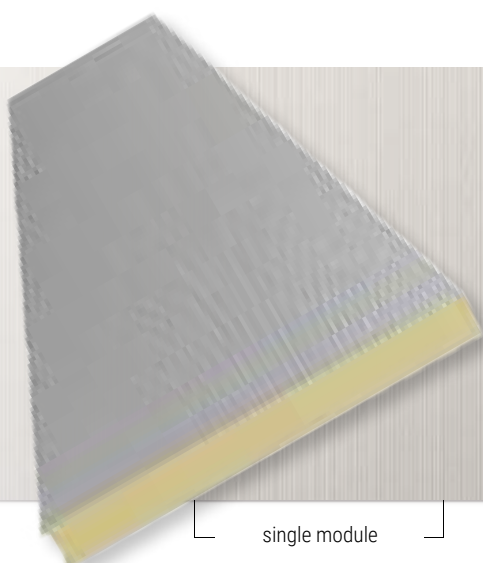




Linear
L



Microprofiled
M



Super-micro
SM

PolDeck TD

Before you order PolDeck TD panels

It is very important to correctly measure the length of the panels to be installed in order to avoid the situation of ordering too long boards (unnecessary waste) or too short ones (which will render the assembly impossible at all in some instances). The lengths of the panels should be specified in the construction design. It can also be measured on the basis of the finished structure. The Ordering party remains responsible for performing these measurements.

The panel thickness should be selected in accordance with the purpose of the building and expectations regarding thermal insulation. Most often, for facilities where people are expected to stay, roof panels with a heat transfer coefficient of not more than 0.15 W/m²K are used. This parameter is met by PolDeck TD 145/180 and 165/200.

The supporting structure of the roof, designed for the assembly of sandwich panels, can be made of steel, wood or reinforced concrete. For each of these types of structures, different Europanels mounting screws are offered.

Remember to keep the appropriate spacing of the purlins, their profile, length and width, in accordance with the construction design. The supporting structure is a support for panels that will transmit snow, wind and rain loads to it.

Do not forget to use acoustic tape on the structure.

Due to the influence of sunlight and strong heating of the roof surface, it is recommended to order roof panels in white (e.g. RAL9010), as well as the use of expansion joints and joining boards in length - thus "shortening" a single section of the board. In this way, it is possible for the boards to "work" on the structure and compensate for changes in the length of the cladding.





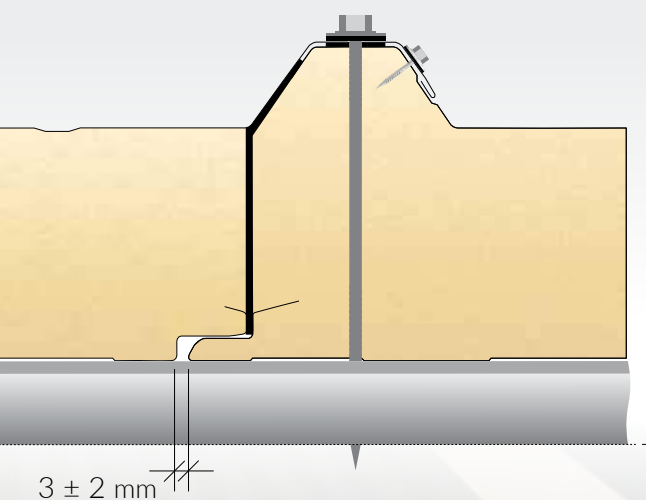
PolDeck TD

PolDeck TD is a roof sandwich panel with a rigid polyurethane foam (PU) core, fixed to the supporting structure with a fastener passing through the entire thickness of the board. PolDeck TD is a universal board and it is suitable for objects of various purposes, with roof slopes of at least 4° (7%) for continuous panels and 6° (10%) for panels joined in length, with skylights, etc.

The **PolDeck TD** roof sandwich panel is available in the following options:

- **OVERLAPPING** – undercutting the inner L & R lining from 50-300mm (not applicable to 40 and 60mm thicknesses).

Panel joint cross-section



Panel cross-section



Available panel thicknesses [mm]

40/75	60/95	80/115	100/135	120/155	145/180	165/200
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Thermal conductivity coefficient λ_b [W/(m·K)]

0.022

Heat transfer coefficient $U_{d,s}$ [W/(m²·K)]

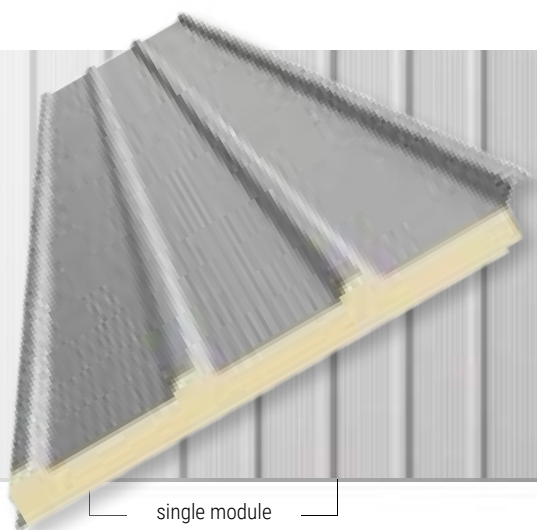
0.56	0.37	0.28	0.22	0.19	0.15	0.13
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Weight 1 m² [kg]

10.7	11.5	12.3	13.0	13.8	14.8	15.6
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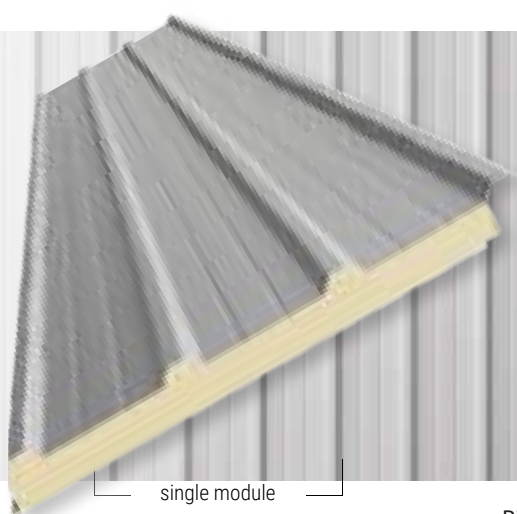
Maximum number of panels per package [pcs.]

18	14	10	8	8	6	5-6
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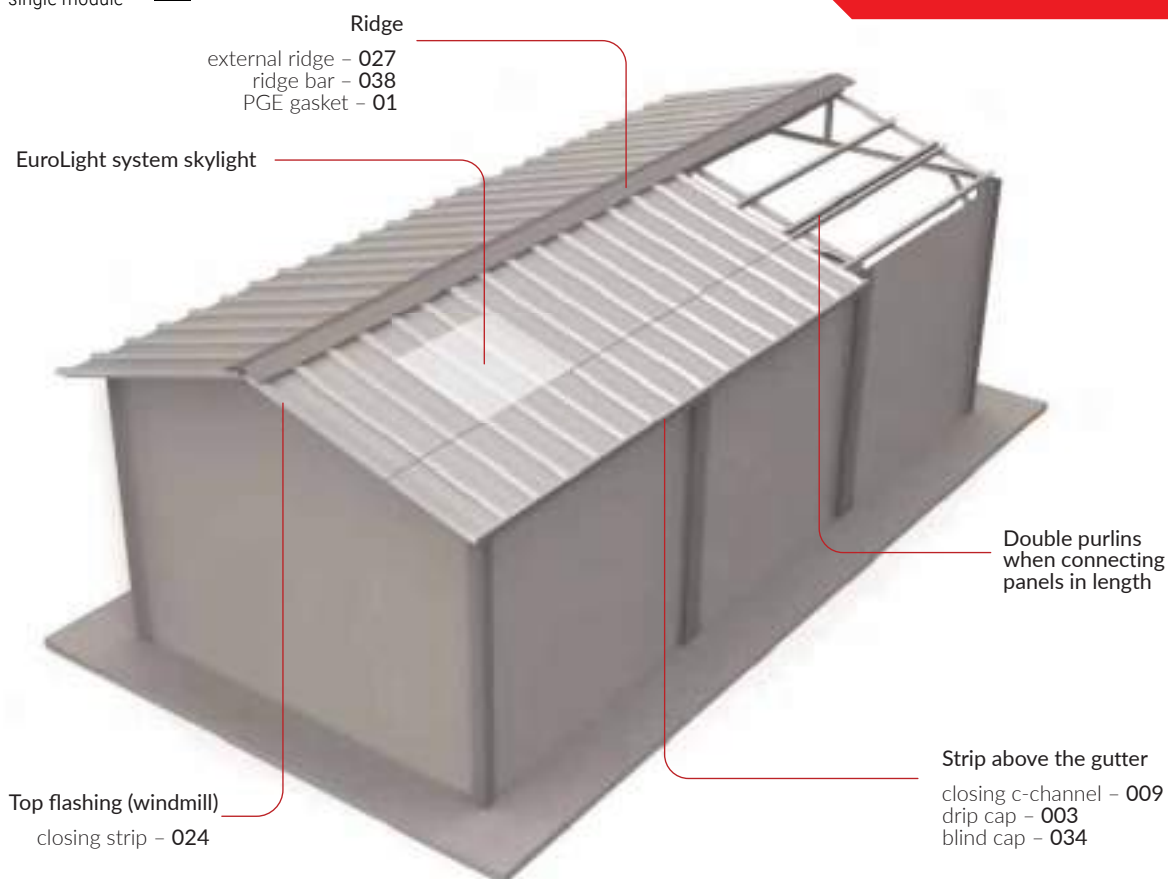
single module

Trapezoidal-micro TM



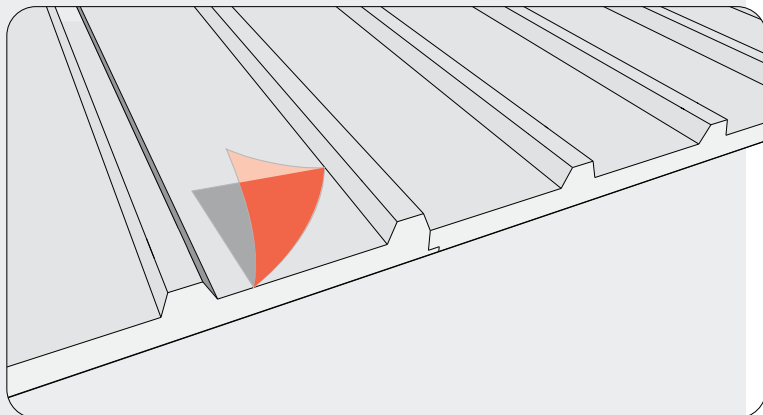
single module

Trapezoid T



1. ASSEMBLY THE ROOF PANELS TO FRAME

1.1. Removing of protection film



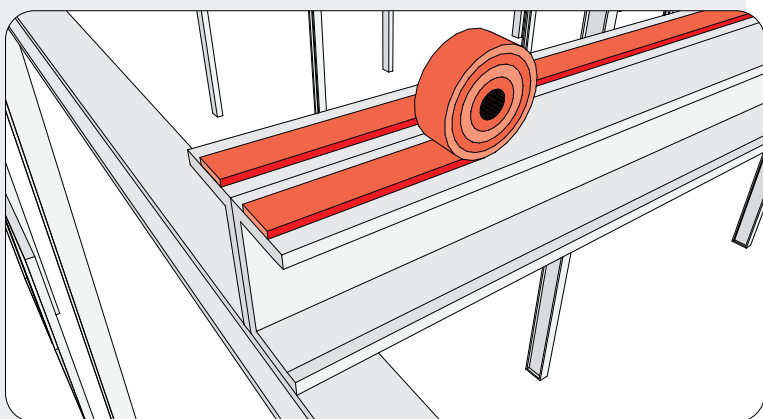
Protective film is applied on panels skins in order to protect panels against mechanical scratches during transportation only. This is not possible for the foil to remain on panels for products lifetime. If the film remains, due to sunlight and UV rays it will be vulcanized. As a result, the film will break into many small pieces and becomes irremovable. This will lead to losing warranty rights.

Because of this it is strongly recommended to remove film ASAP (not later than after 1 month from panels' manufacturing date)



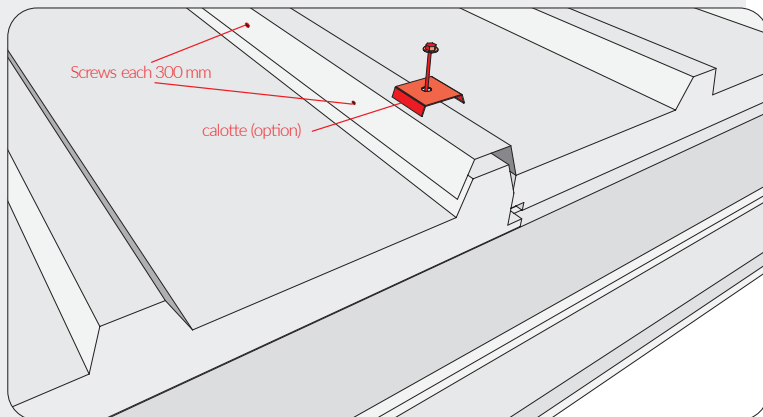
TIP: Beware of metal filings which are always present during cutting or drilling in metal. It is essential to remove them carefully as they are reasons of corrosive points! While removal please do not rub filings onto panels surface. It is wise to flash the roof with running water.

1.2. Installation of acoustic tape



Attach the acoustic tape onto the surface that has contact with the inner skin of the roof panels. Its special features allow you to align the panel and reduce the audible effects of the panels' work on the construction. In addition, this tape prevents panel from scratching while sliding panels during installation and transmission of any corrosion from the supporting frame's structure on the roof panels.

1.3. Placing and fastening the panels



Using the right equipment (vacuum pressure devices are recommended), move the panel from the storage place to the roof. Put the first panel and attach through the ribs to the construction by self-drilling screw from EuroPanels offer. Alignment of the first panel is critical as the others will only follow the joints. Before drilling, remove the protective film from the mounting points. Then download the adjacent panel, place it and secure. The steel fold shoulder of upcoming panel shall evenly adhere to the ribs surface of already screwed one on its entire length. Mounting points correspond with purlins and these should be specified in the building design.

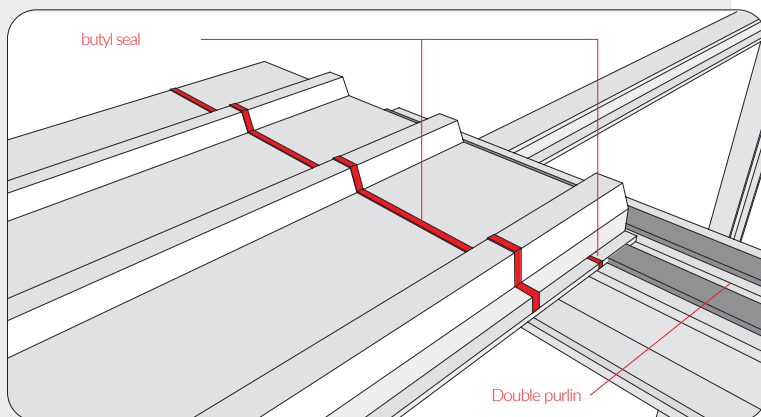
In addition, the fold shoulder is attached laterally by screws in each 300 mm distances. For installation of PolDeck TD roof panels it is recommend to use calottes, which act as shims improving down force in fastening panels to the construction.



TIP: Screws should be screwed when the roof is the most heated by sunlight (if possible).

2. OVERLAPPING

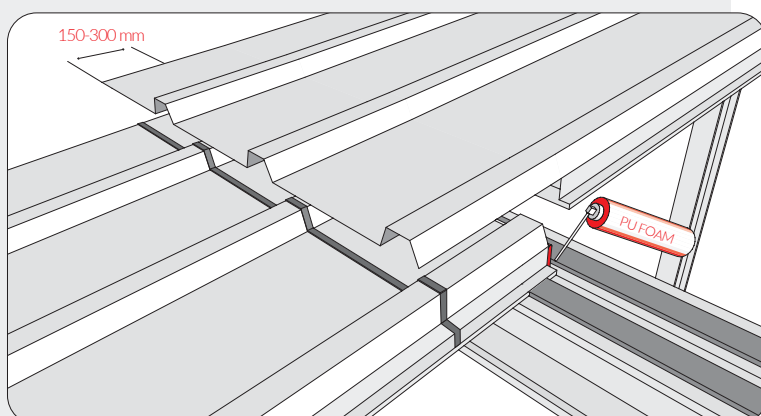
2.1. Alignment of the first panel



If the roof slope has a considerable length, due to strong heating of the panels surface it is recommended to avoid individual panels to have over a dozen meters length. Instead, it is better to combine several shorter sections joined on the length with an expansion joint. This is the so-called overlapping.

For this assembly, in an overlapping point a double purlin solution is necessary. Onto such a construction, place and align the first panel (lower, the one with a gutter). Then on the entire width of the panel's external skin apply butyl seal (approximately 50 mm from the overlapping edge and onto internal joint).

2.2. Preparation for overlapping



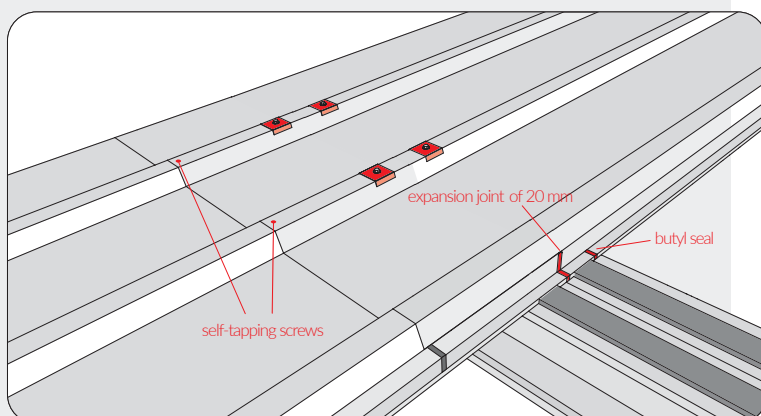
Incoming panel (upper, to the ridge side) are provided with undercut. Undercutting involves cutting the inner skin and a polyurethane core. Prior to installation, remove the undercut portion to remain only with upper steel.

Undercut length is 150-300 mm, depending on the roof's pitch:

- 150 mm for pitch over 20%
- 200 mm for pitch around 16-20%
- 250 mm for pitch around 11-15%
- 300 mm for pitch around 7-10%

Before mounting the incoming panel, please apply a small amount of low-pressure PU mounting foam into full width of the inner edge of the lower panel.

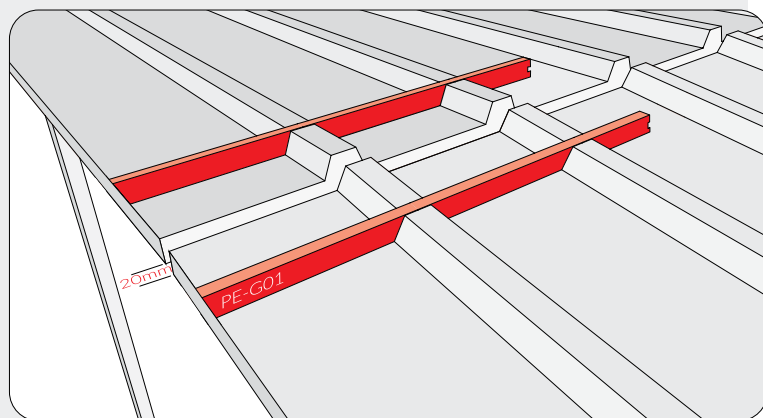
2.3. Fastening



The next step is to close panels together with a 20 mm of expansion joint (space filled with PU mounting foam). This gap is essential, since it compensates the construction work of the panels (thermal, physical loads etc.)

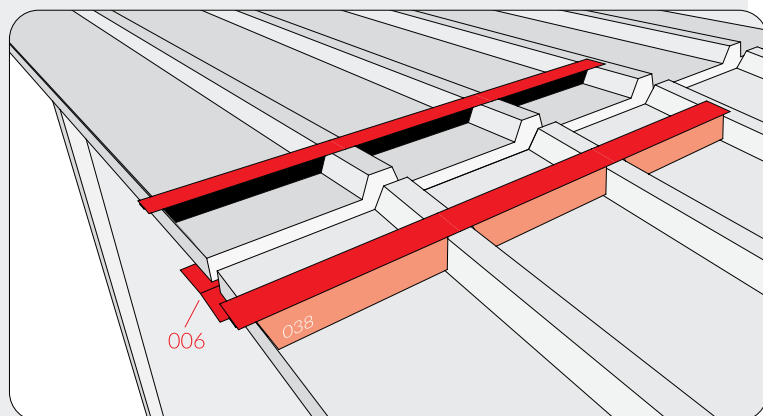
Apply a butyl seal in overlap point and at the panel's edge (close to purlins).

Secure panels to purlins by self-drilling screws from EuroPanels offer. Additionally, in each rib use self-tapping screws applied to the point of butyl sealant discharge (as shown in Figure 2.1). Remember that at this stage of assembling you must not place any screw onto the last rib in order to make space for adjacent one.

3. ROOF RIDGE**3.1. The PE-G01 Ridge Gasket**

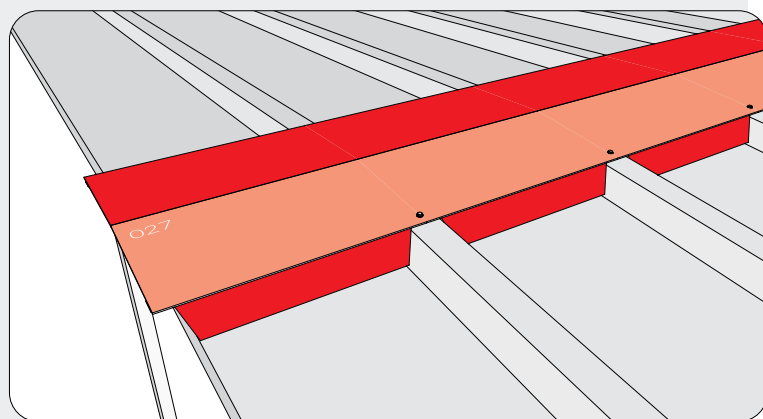
In a gable type roof, internal skins of the panels shall be placed with at least 20 mm distance between inner edges. It is necessary to keep the space as panels will work on a construction during lifespan. The expansion joint cave ought to be filled in with PU mounting foam.

As panels are placed and secured into supporting construction you can place the PE-G01 gaskets. One piece of the gasket comes into individual panel. Repeat the step for the counterpart panel. Positioning of the gaskets: the same spot as for the edge of final ridge flashing.

3.2. Ridge strip

Into the PE-G01 gasket place ridge strip 038. One strip is to be placed into one panel. Each ridge strip covers and evens ribs line. Repeat this step for counterpart panel.

To cover panels on inner side use flashing 006, which shall be screwed into panels internal skins by self-tapping fasteners from EuroPanels range.

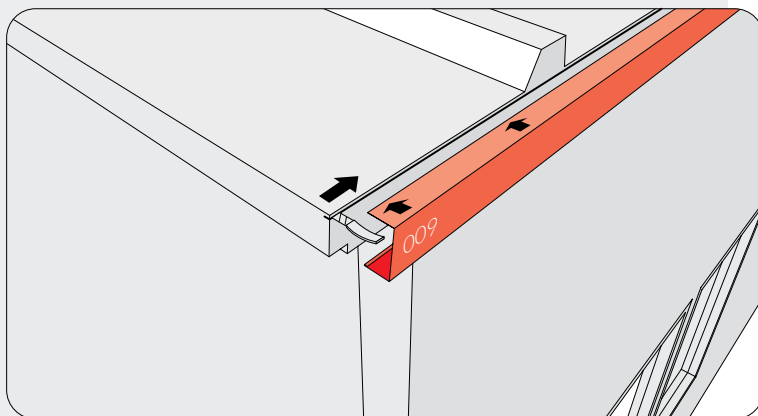
3.3. Ridge flashing 027

Align the roof ridge flashing to panel's ribs and attach using screws from the EuroPanels' range. This may be the outer ridge 027 (flat), or 005 (elevated).

It is recommended to prepare the number of gasket + ridge sets that corresponds to the length of the outer ridge - there are usually three such sets matching to flashing with length of 2500 mm.

4. STANDARD GUTTER AND GABLE END

4.1. C-profile 009

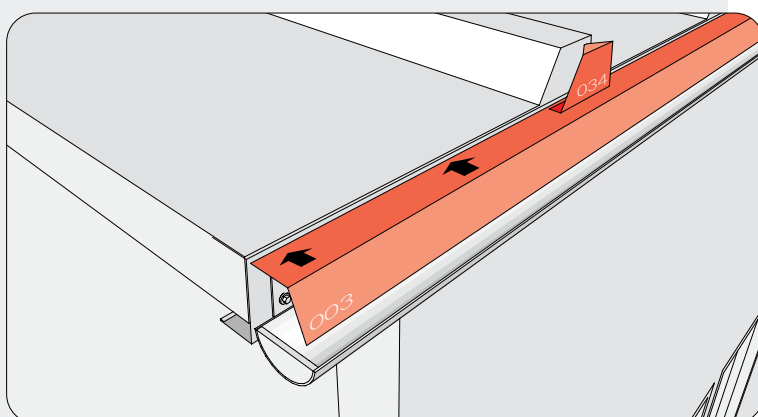


In standard method of finishing gutter and gable end there are ready to use profiles that shall be placed in proper order.

Let's get started with flashing 009 (C-profile) and 003 (eaves). Before you use them make a technological pre-cut just under the outer steel facing and a core using a knife. Depth of the cut shall be ca. 40 mm. Repeat edge cutting on entire width of each panel. To make gutter hooks secured strongly, it is advised to insert a steel stripes behind the 009 flashing's front. The stripes shall be made out of a steel of 1 mm thickness.

Now you can slip in the 009 into prepared slot. The flashing is dedicated to a panel thickness and has upper edge sharp, lower folded. Front shall lean against panel's core. Fasten the flashing on the bottom each 300 mm by short screws.

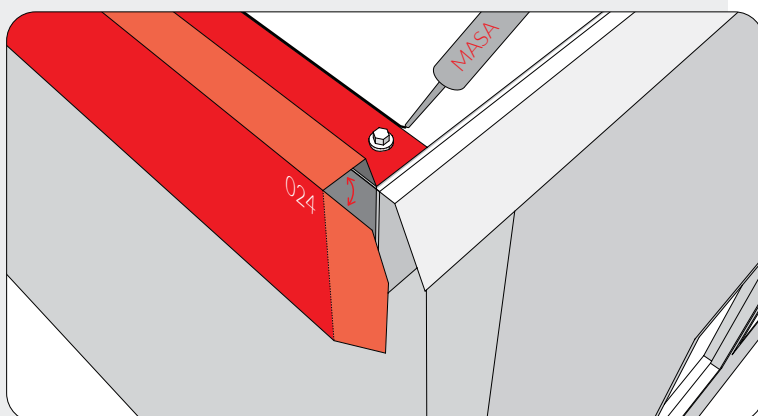
4.2. Eaves 003 and a cap 034



Next step is to place an eave 003. Between outer facing of panel and C profile 009 slip in the 003 eaves. Finally, drill and rivet the finished assembly (2 rivets between panel's ribs). Such a base is now prepared for installation of gutter's hooks.

Last stage of assembling TD panels is covering open ribs in order to prevent core against UV rays. Use element (a cap) 034, which shall be slipped into core and additionally riveted from the top.

4.3. Gable flashing 024



The installation of the 024 gable flashing, the so-called wind brace, begins with shortening the fold of the roof panel overlap. It is recommended to shorten this fold halfway across its width (along the embossed feature). Apply the 024 flashing to the remaining sheet metal. Start the installation from the gutter side so that the next sections of the 024 flashing overlap the previous ones, in accordance with the direction of the roof slope. In the first phase of installation, the 024 flashing should protrude about 70 mm beyond the edge of the gutter strip. Then cut off the upper and lower parts of the 024 flashing, leaving the protruding side element, which should finally be bent towards the middle of the flashing, closing the gap. Fasten the whole thing with appropriate screws and seal it with a special mass from the EuroPanels offer.

PolDeck MD





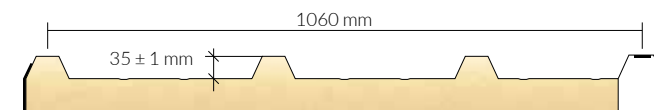
PolDeck MD

PolDeck MD is a roof sandwich panel with a rigid polyurethane foam (PU) core, an internal facing made of laminated polyester resin (hence the name laminate) reinforced with glass fiber, fixed to the supporting structure with a fastener passing through the entire thickness of the board. The number of connectors is determined by load tables and design loads.

The outer cladding is metal as in standard TD roof panels. **PolDeck MD** board is a panel for use mainly in livestock facilities, where there is an increased concentration of aggressive substances that increase the corrosivity of the environment.

PolDeck MD is suitable for use in horticulture, storage rooms, warehouses, barns, poultry houses, facilities with roof slopes of at least 4° (7%) for continuous panels and 6° (10%) for boards joined in length, with skylights, etc. Laminate claddings can be washed with water under pressure (at an appropriate distance and direction).

Panel cross-section



Available panel thicknesses [mm]

40/75	60/95	80/115	100/135	120/155
-------	-------	--------	---------	---------

Thermal conductivity coefficient λ_0 [W/(m·K)]

0.028	0.028	0.027	0.027	0.026
-------	-------	-------	-------	-------

Heat transfer coefficient $U_{4,s}$ [W/(m²·K)]

0.62	0.43	0.32	0.26	0.22
------	------	------	------	------

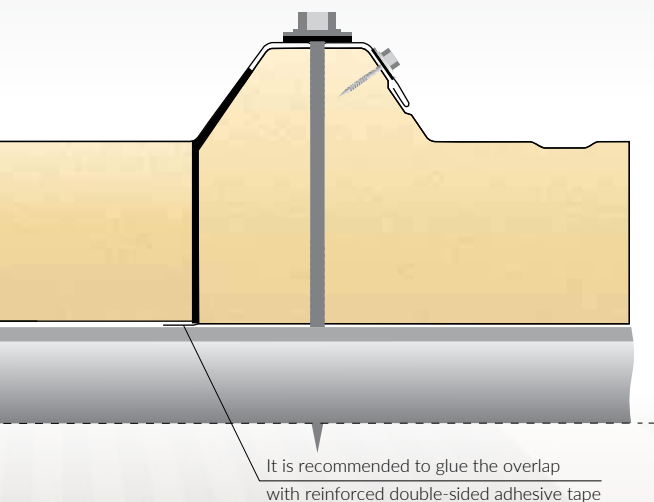
Weight 1 m² [kg]

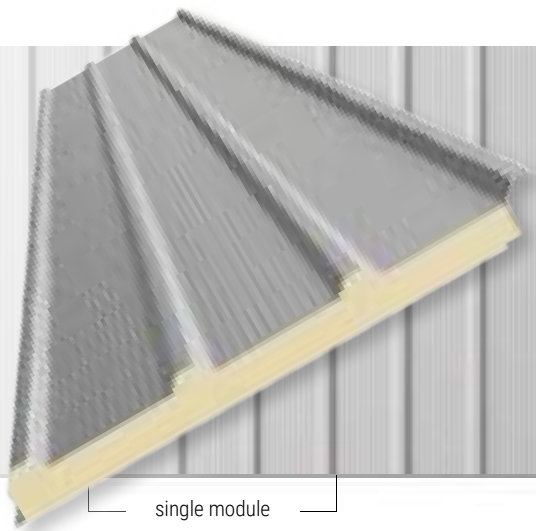
6.47	7.23	7.98	8.74	9.50
------	------	------	------	------

Maximum number of panels per package [pcs.]

18	14	10	8	8
----	----	----	---	---

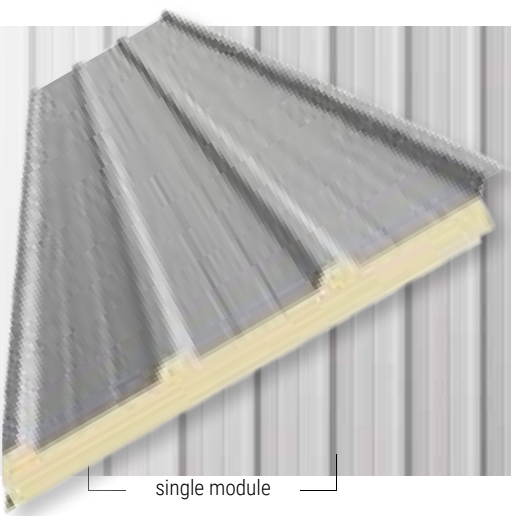
Panel joint cross-section





single module

**Trapezoidal-micro
TM**



single module

**Trapezoid
T**



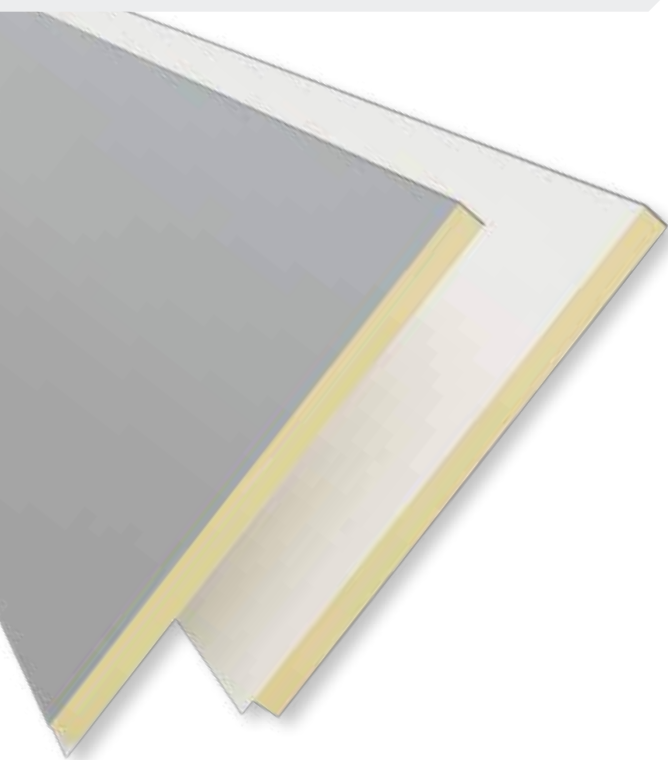
- Low water absorption - less than 1%
- Resistance to chemicals and biological agents: acids, alcohols, bases, solvents, ammonia, moulds
- The surface of the laminate can be washed with a pressure washer
- Operating temperature from -40°C to 110°C
- Wide application in facilities such as: pig farms, barns, poultry and goose houses, fruit and vegetable stores, facilities containing ammonia in the atmosphere

PolTherma SOFT

PolTherma SOFT is a high-quality product manufactured on the basis of the latest technologies, intended for use as thermal insulation in buildings. **PolTherma SOFT** boards are in the form of insulation panels made of rigid PU foam. The use of **PolTherma SOFT** boards gives a number of measurable benefits both at the assembly stage and during the operation of the building.

PolTherma SOFT panels are available with two types of cladding:

- **COMPOSITE** - multilayer cladding: paper, PE film, AL foil (external/ internal cladding)
- **LAMINATE** - polyester resin reinforced with fibreglass (inner lining)



Available panel thicknesses [mm]

40	60	80	100	120
----	----	----	-----	-----

Thermal resistance value R [(m²·K)/W] - COMPOSITE

1.81	2.70	3.57	4.54	5.55
------	------	------	------	------

Thermal resistance value R [(m²·K)/W] - LAMINATE

1.42	2.12	3.03	3.84	5.00
------	------	------	------	------

Heat transfer coefficient U_{d,s} [W/(m²·K)] - COMPOSITE

0.55	0.37	0.28	0.22	0.18
------	------	------	------	------

Heat transfer coefficient U_{d, S} [W/(m²·K)] - LAMINATE

0.70	0.47	0.33	0.26	0.20
------	------	------	------	------

Maximum number of panels per package [pcs.]

28	18	14	11	9
----	----	----	----	---

Energy Efficiency

The use of PolTherma SOFT panels contributes to effective thermal insulation of the building. It allows for stable maintenance of the desired air temperature. PolTherma SOFT provides excellent thermal insulation, both in winter and summer.

Ease of installation

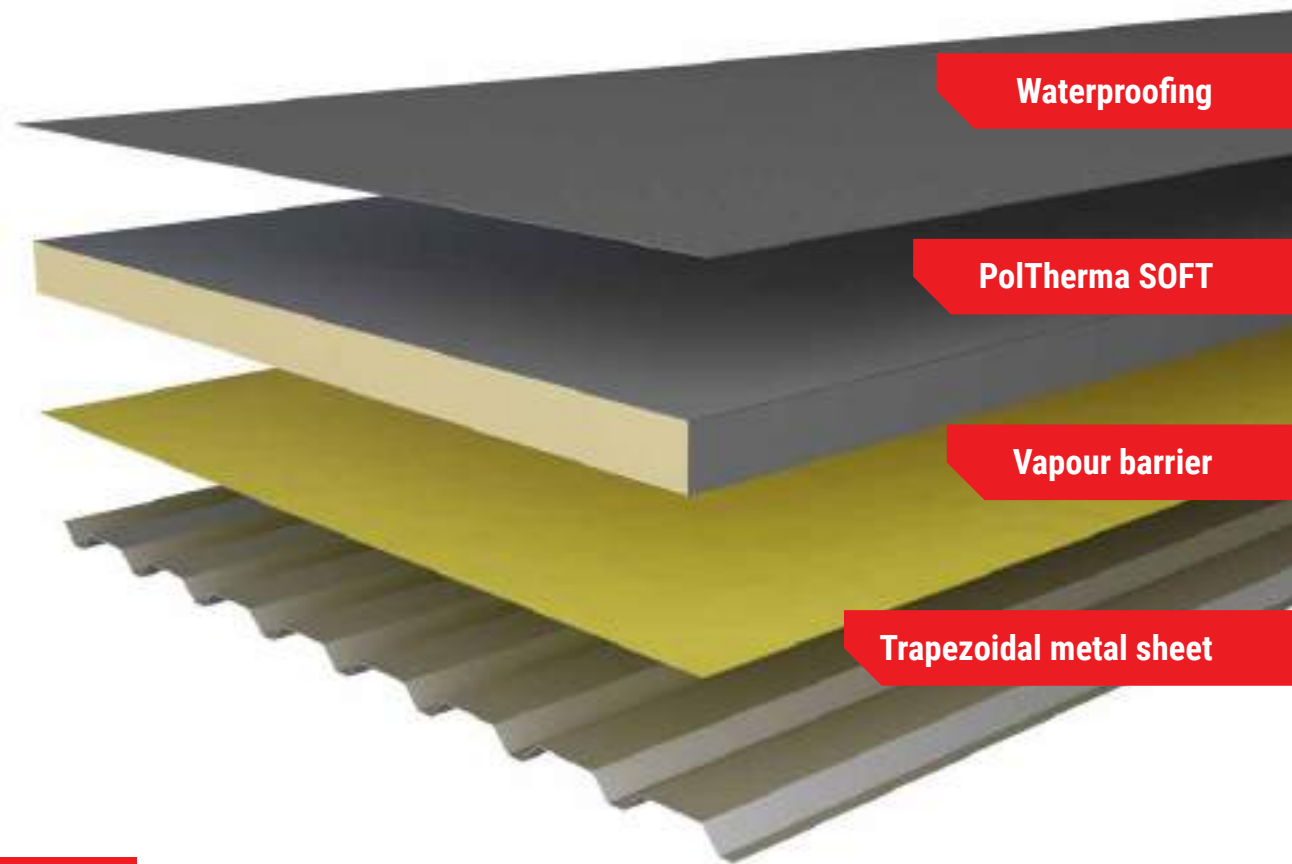
Thanks to the use of a core made of PU foam, the PolTherma SOFT board has very high resistance to external pressures and mechanical deformations. Such features are necessary to execute thermal insulation of a durable flat roof and for its subsequent trouble-free maintenance.

Mechanical strength

The installation of PolTherma SOFT insulation boards is extremely easy, thanks to their low weight and simple processing, without dusting. The use of milled contact additionally affects the convenience of assembly, while improving thermal insulation properties. Panels available on request.

Low hygroscopicity

An important parameter determining the thermal insulation properties of the material is its low water absorption. PolTherma SOFT boards use the most advantageous insulation material: polyurethane foam core. Thanks to its closed cells, it is characterized by very high resistance to moisture ingress and air infiltration.



Panel cross-section

1080 mm

1050 mm

Main characteristics of PolTherma SOFT panels:

- Very good thermal insulation - the best of the materials currently used in construction:
 - the lowest value of the thermal conductivity coefficient $\lambda_D = 0.022 \text{ [W/m}\cdot\text{K]}$ *
 - almost twice smaller insulation layer in relation to other known insulating materials, with the same heat transfer coefficient U
- High thermal stability for the entire service life of the building thanks to the closed cell structure, especially in combination with a gas-tight cladding (composite).
- Lightweight – which minimizes the loads on the load-bearing structure
- Negligible hygroscopicity - water absorption (of less than 2%) for the core
- High chemical resistance of the core to organic solvents
- Resistance to fungi and microorganisms
- Simplified and safe installation
- The core does not degrade over time
- CE Declaration of Performance according to PN-EN 13165+A1:2015-03

* Declared value at +10

Intended purpose of PolTherma SOFT panels:

- Insulation of diaphragm walls
- Insulation of flat and sloping roofs
- Insulation of floors and terraces
- Insulation of interior walls and ceilings
- Domestic and industrial use

ThermaStyle PRO





ThermaStyle PRO

ThermaStyle PRO is a wall sandwich panel with a polystyrene (EPS) core that can be attached to the supporting structure using a connector invisible from the facade side. Thanks to this, the surface of the walls installed in the **ThermaStyle PRO** system is homogeneous and undisturbed by fasteners. **ThermaStyle PRO** boards can also be installed in a standard way, i.e. directly through with connectors to the supporting structure - wooden, steel or made of reinforced concrete.

The versatile nature of the **ThermaStyle PRO** panels allows for fast, very cheap and durable erection of light wall structures with a variety of purposes.



Vertical panel layout

EUROPANELS connector
self-drilling screws
PU-foam
sealing compound

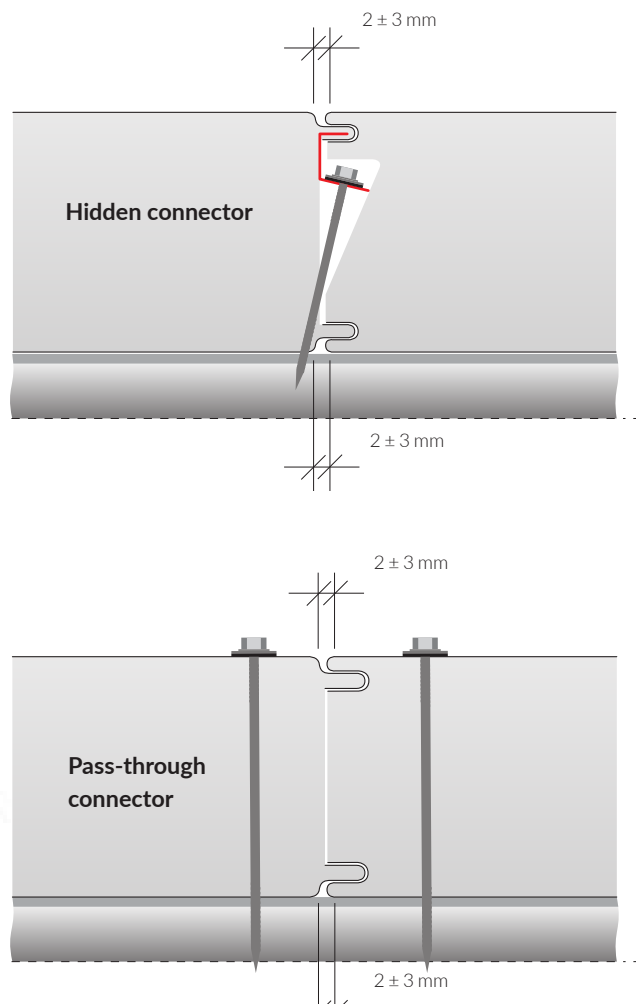


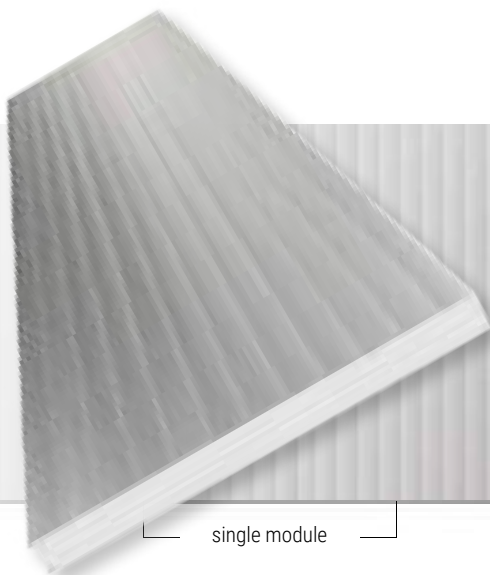
Horizontal panel layout

EUROPANELS connector
self-drilling screws
contact line – 019
PU foam
sealing compound

Panel cross-section							
1190 mm							
Available panel thicknesses [mm]							
50	75	100	125	150	200	250	300
Thermal conductivity coefficient λ_b [W/(m·K)]							
0.037							
Heat transfer coefficient $U_{d,s}$ [W/(m²·K)]							
0.62	0.44	0.34	0.28	0.23	0.18	0.15	0.12
Weight 1 m² [kg]							
9.4	9.8	10.2	10.6	11.1	11.9	12.8	13.6
Maximum number of panels per package [pcs.]							
10	13	10	8	7-8	5	4-5	3

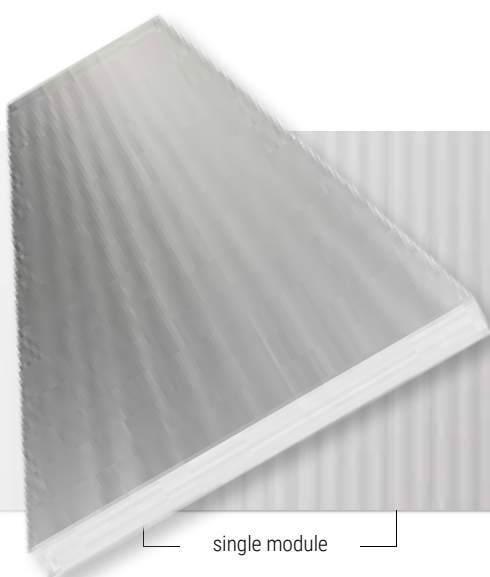
Panel joint cross-section





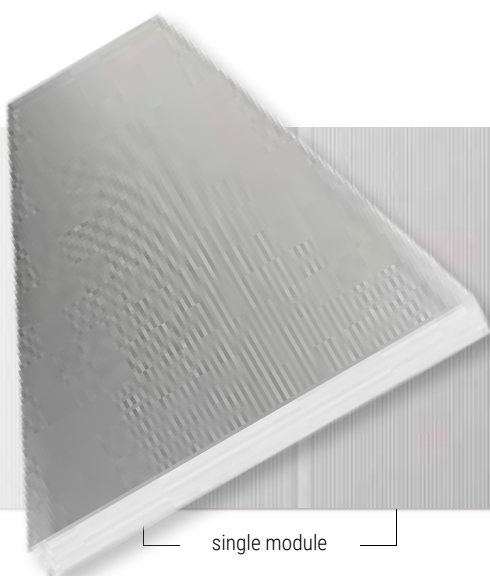
single module

Trapezoid
T



single module

Linear
L

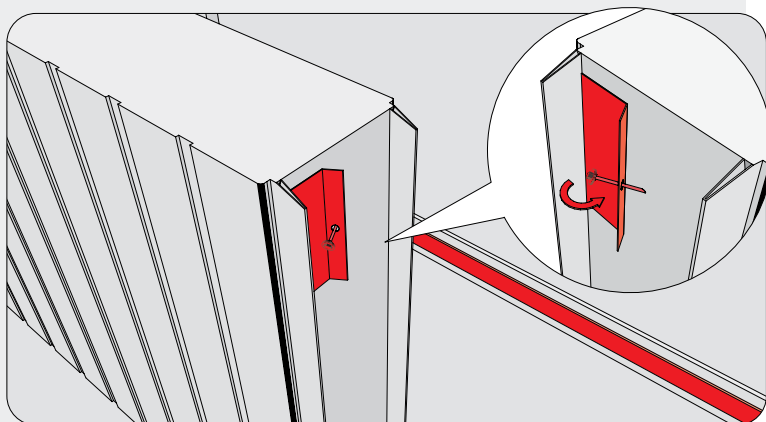


single module

Microprofiled
M

1. VERTICAL ASSEMBLY

1.1. Placing the EUROPANELS jumper



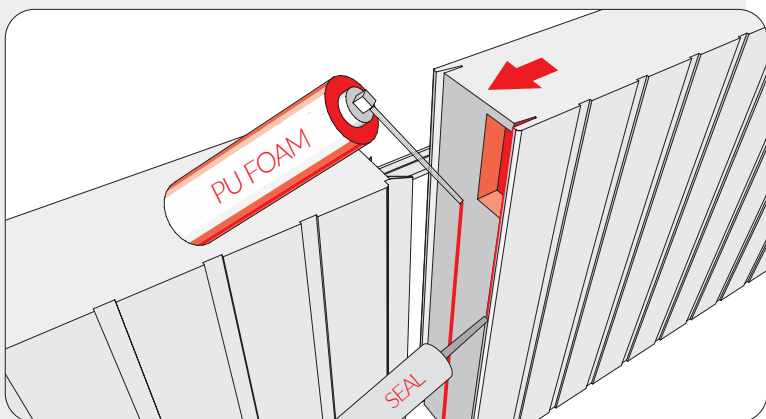
Using the EUROPANELS clamp allows to avoid any visible fastening elements on the facade of the building. The clamp is applied accordingly to supporting beams lining.

First, apply an acoustic tape onto beams' surface. Slide or fold over the EUROPANELS clamp on the male element of the joint until it reach core surface.

Now place a self-drilling screw into a hole of the clamp. Please be aware as the screw will be drilled into the beam at a certain angle (not straight-forward) Do not use excessive force while fastening, otherwise you could break or damage panel's surface or joint.

The most important is leveling the first panel, as the next ones will follow.

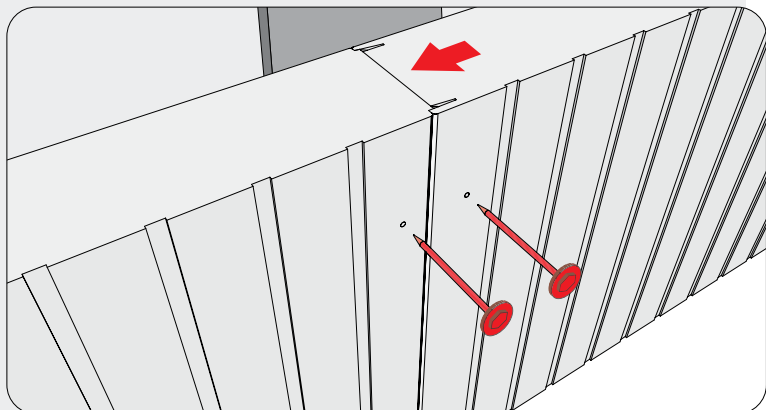
1.2. Joining the panels with the EUROPANELS jumper



As the first panel is secured properly, the next one shall be pushed tightly to close the joint. But before it is necessary to remove a part of EPS core from the upcoming panel in order to make some space for jumper to hide. To do this simply remove by a knife amount of EPS adequate to size of the joint. Wisest way is to do this all together for the whole panels is to measure beams span and knowing jumper size cut panels in bundle with about 2 cm tolerance. The same method is used for our roof EPS panels ThermaDeck PRO.

Close panels pushing them together in a way that ensures full tightness of locks without irregularities. Than secure the panel on the other side as shown in Figure 1.1. To improve the tightness of the joint, on the insulation core could be spread on a thin strip of polyurethane foam. Additionally a sealant could be applied into joint edges.

1.3. Other metod of assembly – visible joint

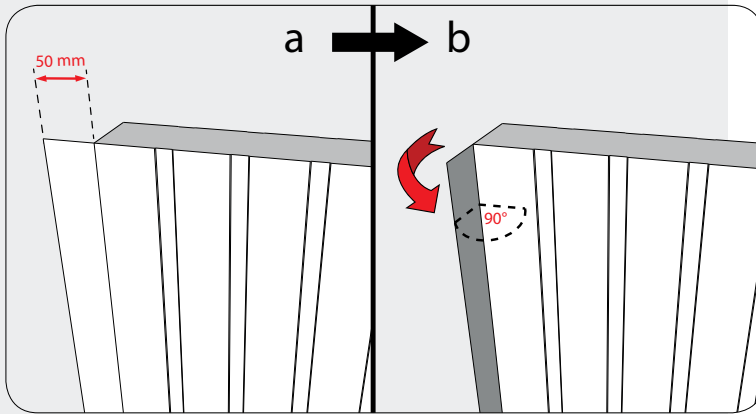


Traditional way of assembling panels is screwing them throughout to the supporting construction. In result heads of the fasteners remain visible on façade. To cover them we recommend to use a special coloured caps from our accessories range.

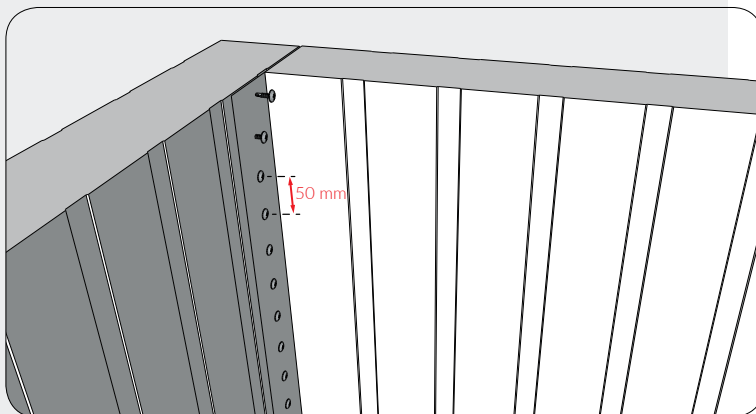


Hint: Screwing the boards try to avoid too strong tightening the screws, as this may result in visible deformation of steel skin (negative "bowl effect"). Tighten the screw until the first sign of rubber pad deflection.

2. Installation instructions for wall sandwich panels with EPS core - ThermaStyle PRO for the purposes of reaction to re classification B-s2, d0 (NRO)



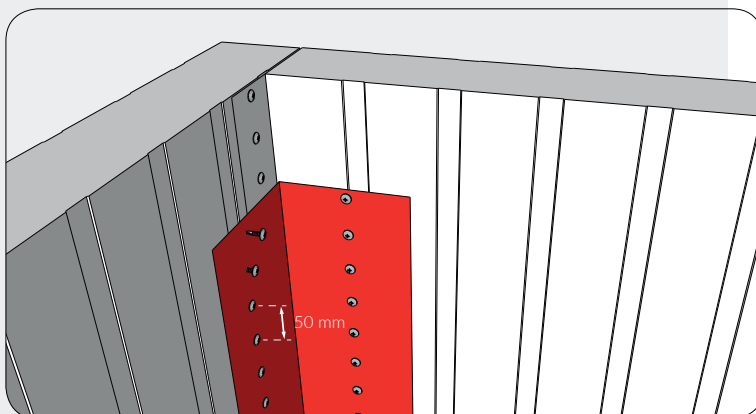
1. **Panel Overlapping (sheet overlap) = 50 mm**
 - a. Corner installation: protruding edge of the cladding 50 mm from the room side (internal cladding)
 - b. Partition wall installation: symmetrical execution (protrusion of claddings by 50 mm on both sides)
2. **Bending the cladding edge by 90°**
Using boards or steel profiles attached to the panel along the bending line (e.g., using a secured woodworking clamp), bend the protruding 50 mm edge of the cladding at a right angle pod kątem prostym.



3. **Joining panels**
Slide the wall elements together.
 - a. Corner installation: align with the external dimension of the panels
 - b. Partition wall installation: maintain a right angle of the elements on both sides

4. Fixing (stitching) the claddings

Using self-drilling screws 4.2x13 mm with a flat head (PH2), stitch the panel claddings at intervals of 50 mm. Maintain a straight stitching line in the middle of the width of the bent cladding.



5. Finishing works

Using self-drilling screws 4.2x13 mm with a flat head (PH2), stitch the claddings with the angle flashing 100x100x0.5 mm. Perform stitching on both sides of the flashing at intervals of 50 mm. Maintain a straight stitching line in the middle of the flashing width. Perform stitching on the side with screws from point 4 in a staggered manner (effective distance between self-drilling screws 25 mm). Using self-drilling screws 4.2x13 mm with a flat head (PH2), stitch the claddings with the angle flashing 100x100x0.5 mm. Perform stitching on both sides of the flashing at intervals of 50 mm. Maintain a straight stitching line in the middle of the flashing width. Perform stitching on the side with screws from point 4 in a staggered manner (effective distance between self-drilling screws 25 mm).

ThermaDeck PRO

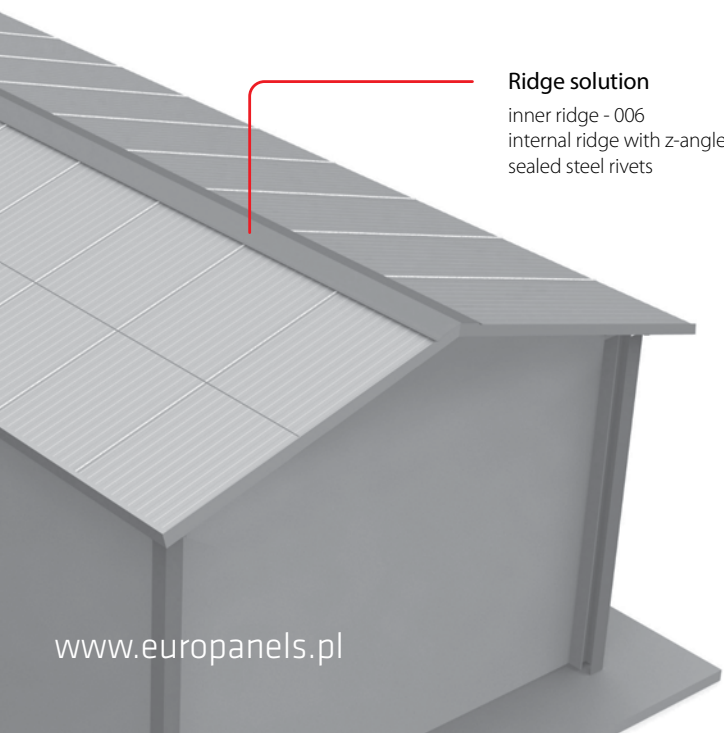




ThermaDeck PRO

ThermaDeck PRO are roof sandwich panels with an EPS polystyrene core. They can be fixed to the supporting structure with a set consisting of a EUROPANELS concealed fastener and a screw (so-called concealed fastening) or directly with a through screw (so-called visible fastening).

ThermaDeck PRO boards are intended for use as roofing for all types of buildings where the slope of the roof slope in the slope direction is at least 4° (7%) for a cover consisting of a single board (up to 7 m) or 6° (10%) for boards joined in length, installed with skylights, etc.



Ridge solution

inner ridge - 006
internal ridge with z-angle -005A
sealed steel rivets

Panel cross-section



Available panel thicknesses [mm]

75	100	150	200	250	300
----	-----	-----	-----	-----	-----

Thermal conductivity coefficient λ_b [W/(m·K)]

0.037

Heat transfer coefficient $U_{d,s}$ [W/(m²·K)]

0.46	0.36	0.24	0.18	0.15	0.12
------	------	------	------	------	------

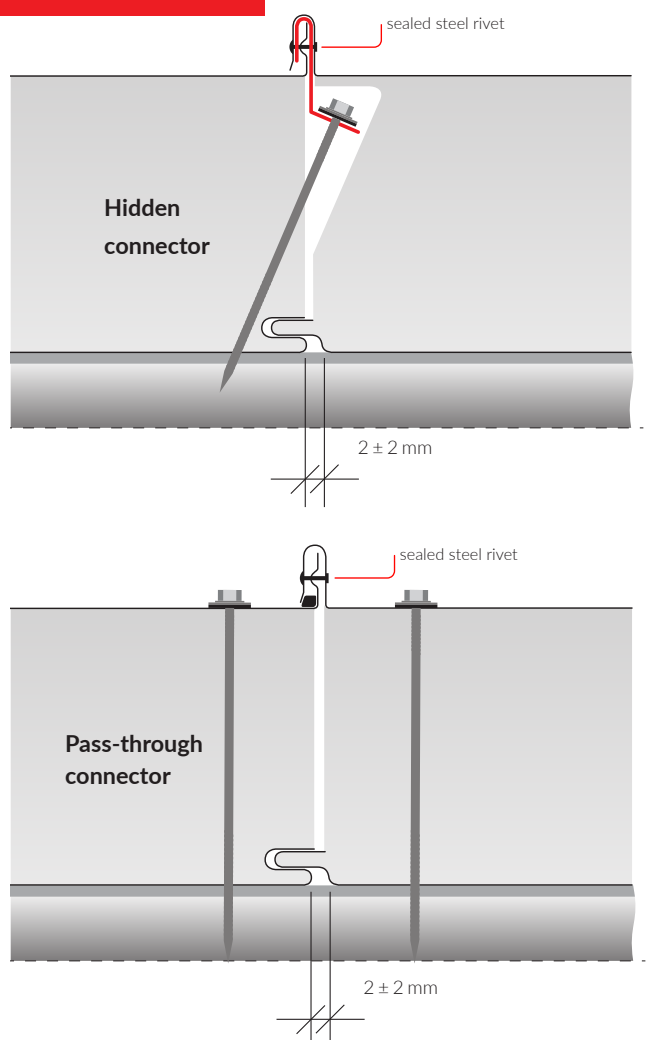
Weight 1 m² [kg]

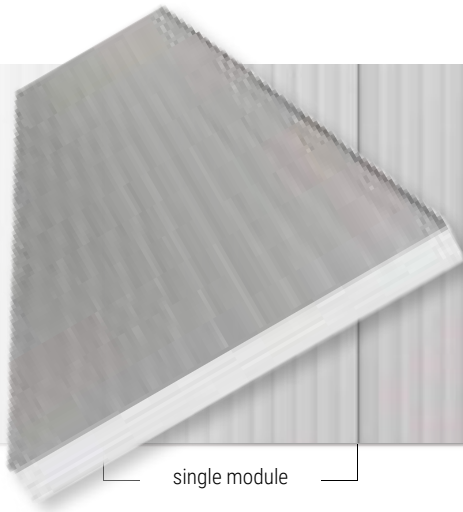
10.2	10.6	11.1	11.9	12.8	13.6
------	------	------	------	------	------

Maximum number of panels per package [pcs.]

7-8	7-8	6	4-5	4	3
-----	-----	---	-----	---	---

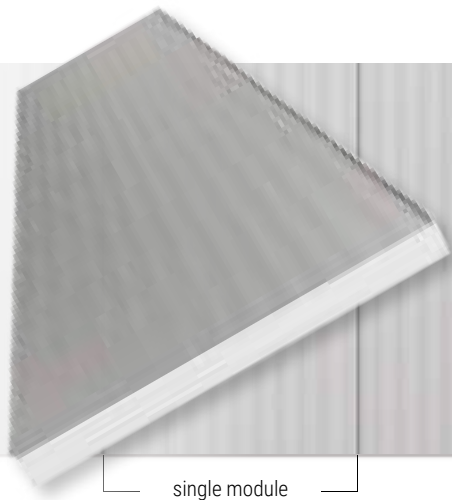
Panel joint cross-section





single module

Trapezoid
T



single module

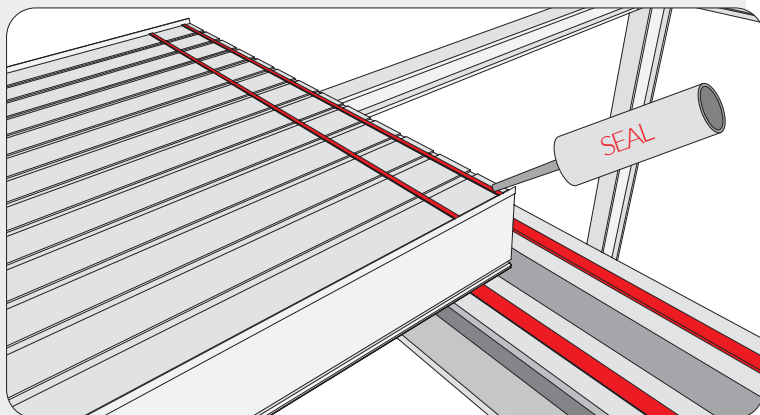
Linear
L

Hidden connector



1. JOINING PANELS ON LENGTH

1.1. Preparation of the first panel

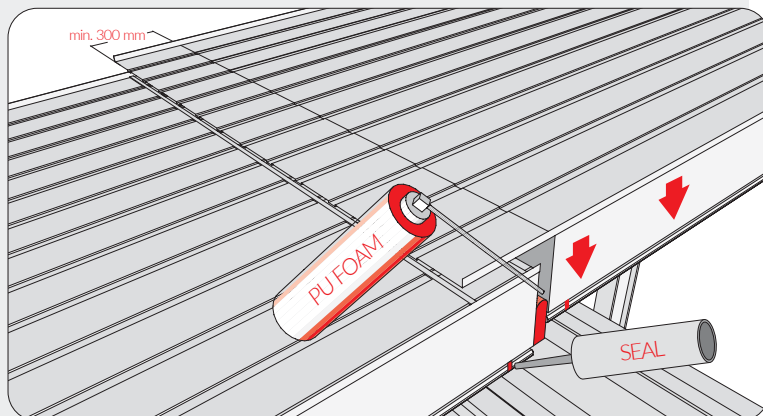


In case of a roof span longer than 7 m, due to technical reasons it is recommended to assemble panels divided into shorter lengths and joining them with expansion joint on double purlin.

It is related with thermal expandability of sandwich panels exposed onto direct sunlight. This is another reason why roof panels shall be light, preferably within first shiny colours group (like RAL9010).

Apply acoustic tape onto purlins. Place first panel - the one from the gutter's side and with standing edge to the assembly direction. Apply butyl sealant on joining area.

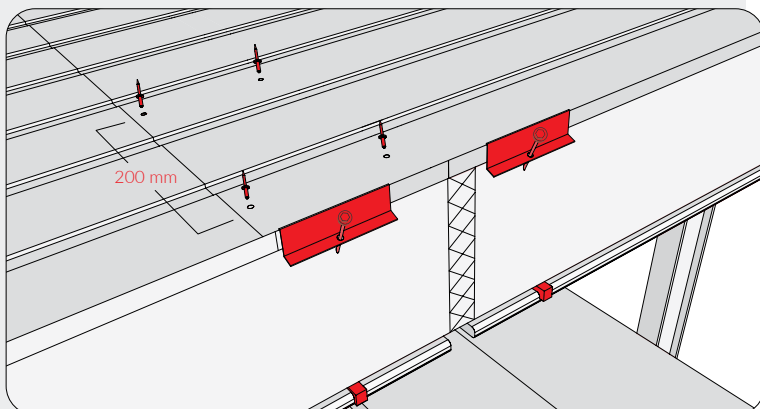
1.2. Overlapping



Overlapped panels have an overlapping undercut. It means, that the internal facing is pre-cut and the facing plus core shall be removed before assembly (only the upper steel remains). Length of the overlapping shoulder shall be ca. 300 mm.

Place the upcoming panel with 20 mm of expansion joint. Expansion joint shall be filled with PU assembly foam. Side joint shall be sealed with a roofing sealant.

1.3. Securing



Now secure panels to the supporting construction. First join external facing by riveting them to each other. Do it on the lines of the butyl sealant. Interval of riveting: each 200 mm.

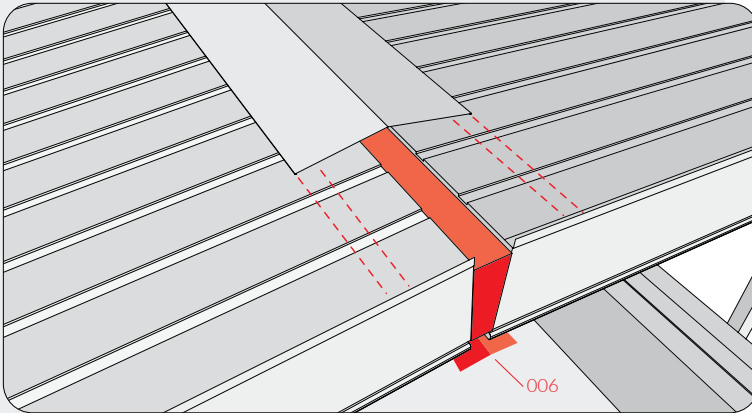
If assembling method is a hidden joint, place EUROPANELS jumpers on standing edges and secure by screwing them into supporting construction. Then place another panels remembering of the space for jumpers, that will require removal of some core in upcoming panel.



TIP: Last stage of assembly is riveting every jumper with a steel tight rivet. To do this just drill the hem and install the rivet. Remove metal filings and protective film from panels as soon as possible!

2. ROOF RIDGE FOR THERMADECK PRO

2.1. Thermal insulation and inner flashing 006

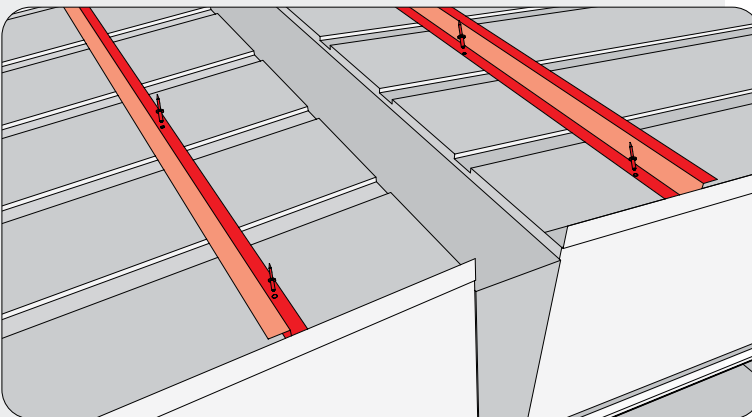


Roof gable could be closed in many ways. In our recommendation it is a set of ridge flashing 005A, inner closing 006 and a Z-profiles. For the ThermaDeck PRO it is best way due to standing edges of the panels.

In gable, a distance of about 20 mm between inner facings shall be maintained. After panels are secured to supporting construction, you can install a 006 inner flashing. The gap between panels should be sealed with an assembling PU foam.

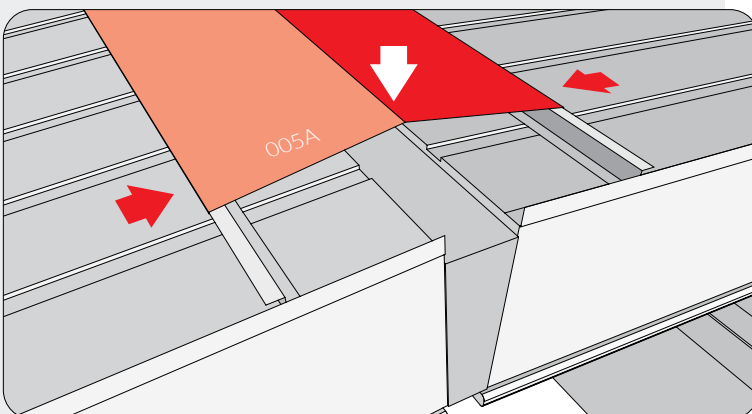
For lining of the outer flashing, place it on the gable and mark lines for Z-profiles.

2.2. Z-profiles



Place the 005 Z-profiles accordingly to the lines, than drill and rivet them to panel facings. Pay attention to direction of the Z-profiles - finally you will be sliding outer ridge on outer Z-edges. Properly, rivets should be covered by Z-profiles (directed into centre of the ridge), being invisible from outside.

2.3. External ridge 005A



In the end slide outer ridge into the Z-profiles. You can also place one edge first, than by pressing to the centre of the ridge place the other one and release. Finally, the 005 flashing shall completely cover the gable. If it is loose, tight / adjust the Z-profiles.

METAL FLASHINGS

Modern double CNC bender

Europanel has the best-in-class, state-of-the-art, computer-controlled automatic sheet bending machines. They are controlled with touch panel, on which the machining is first drawn, then the dimensions and angles are corrected with very high accuracy, later the method of making the element is checked to eliminate possible collisions of bent edges. At the end, the prepared sheet metal is fed and after a while we get a ready element, which the bending machine executes strictly according to the entered data under the supervision of the operator. The sheet is gripped by hydraulically controlled "fingers", bent in both directions (up and down), moved automatically while maintaining very high precision.

Parameters:

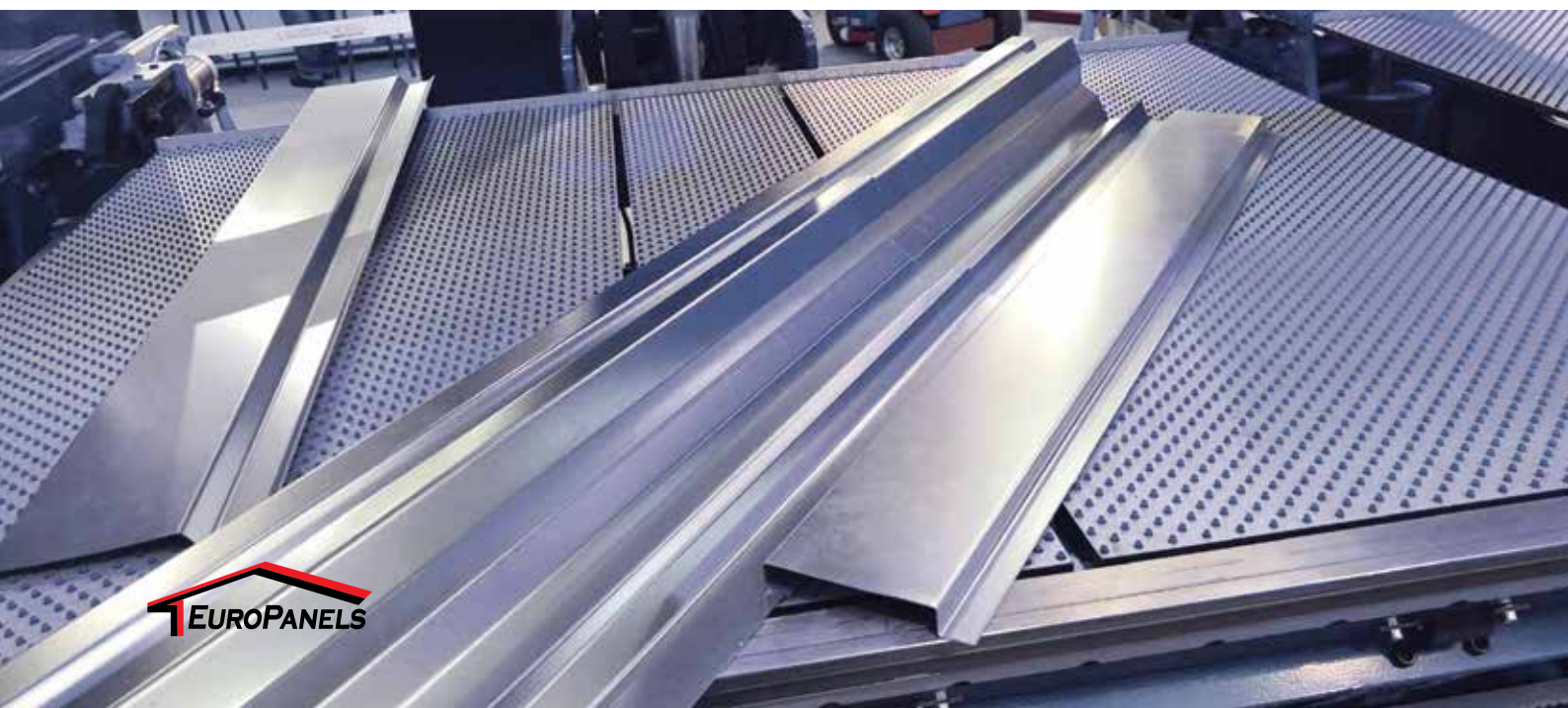
- thickness of steel sheets: up to 1.5 mm
- thickness of aluminum sheets: up to 2.0 mm
- minimum facing: 15 mm
- maximum length of the finished element: 6.4 m
- maximum batch width of the sheet: 1250 mm
- maximum bending angle: 140°
- possibility to execute several elements at the same time (e.g. 3 × 2 m; 2 × 3 m)

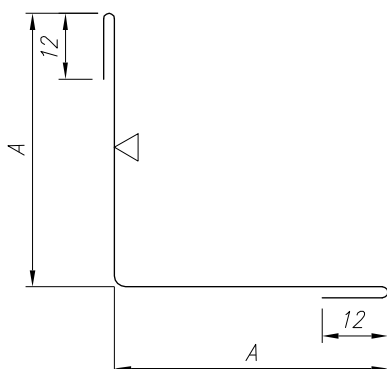


Numerical control
also according to any customer's design

Why it's worth to order flashings at Europanel

- fast production of standard flashings from the Europanel catalogue tailored to the board assortment
- the possibility of individual flashings according to the customer's drawing
- 100% repeatable dimensions (important mainly for maintaining even sections and bending angles during serial production)
- any length of the elements made (up to 6.4 m max)
- each element can have a conical end, enabling perfect joining along the length (machining slide in at for distance of 50mm, which compensates for the thickness of the sheets resulting in an even outer edge)
- possibility to perform non-standard flashings with very sophisticated shapes



**Inner angle 50**

Cat.-No.: 001

For panels:

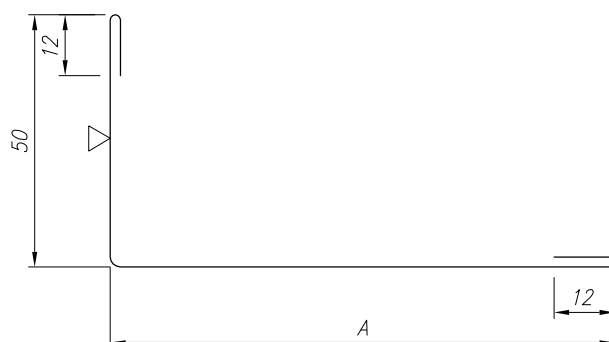
PolTherma CS / X

PolTherma DS

PolTherma PS

PolTherma TS / X

ThermaStyle PRO

**External angle 70**

Cat.-No.: 002

For panels:

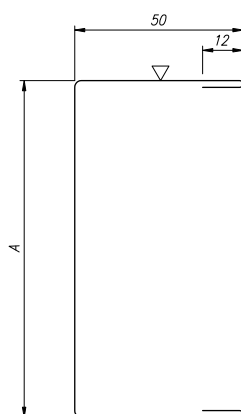
PolTherma CS / X

PolTherma DS

PolTherma PS

PolTherma TS / X

ThermaStyle PRO

**Masking C-profile**

Cat.-No.: 004

For panels:

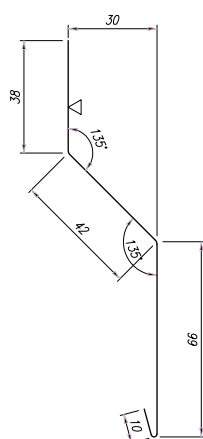
PolTherma CS / X

PolTherma DS

PolTherma PS

PolTherma TS / X

ThermaStyle PRO

**Masking strip**

Cat.-No.: 008A

For panels:

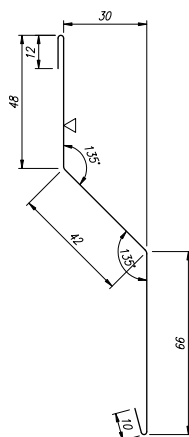
PolTherma CS / X

PolTherma DS

PolTherma PS

PolTherma TS / X

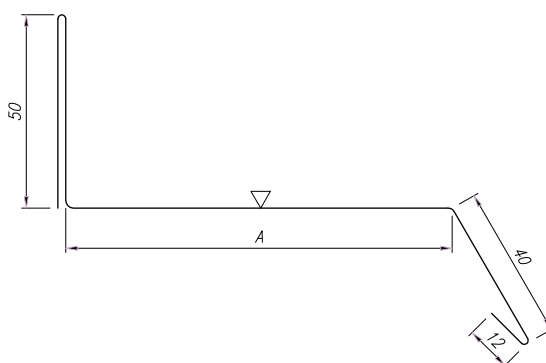
ThermaStyle PRO



Masking strip

Cat.-No.: 008B

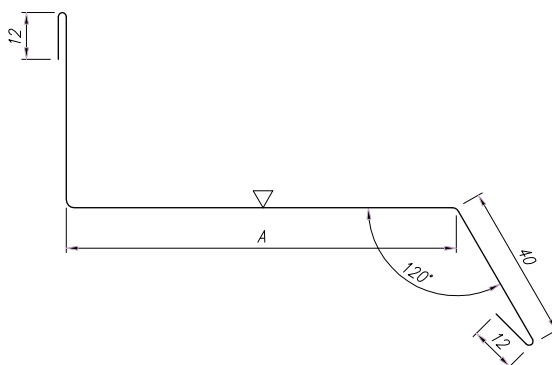
For panels:
PolTherma CS / X
PolTherma DS
PolTherma PS
PolTherma TS / X
ThermaStyle PRO



Starting strip

Cat.-No.: 013

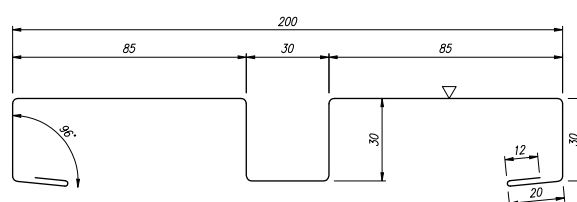
For panels:
PolTherma CS / X
PolTherma DS
PolTherma PS
PolTherma TS / X
ThermaStyle PRO



Starting strip

Cat.-No.: 013A

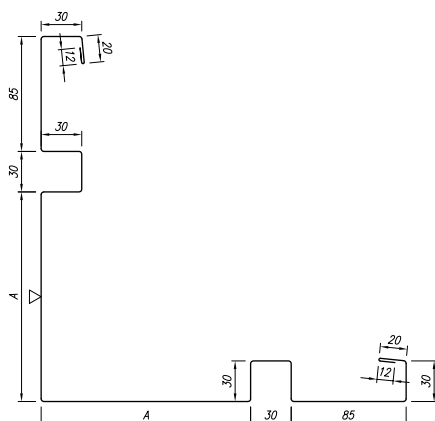
For panels:
PolTherma CS / X
PolTherma DS
PolTherma PS
PolTherma TS / X
ThermaStyle PRO



Groove contact strip

Cat.-No.: 015

For panels:
PolTherma CS / X
PolTherma DS
PolTherma PS
PolTherma TS / X
ThermaStyle PRO

**Outer groove angle**

Cat.-No.: 016

For panels:

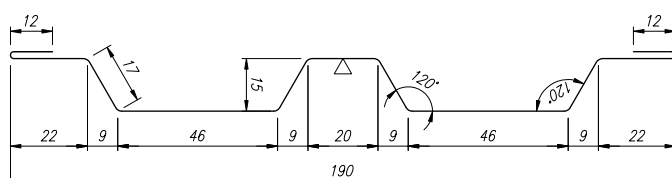
PolTherma CS / X

PolTherma DS

PolTherma PS

PolTherma TS / X

ThermaStyle PRO

**Cassette joint strip**

Cat.-No.: 017

For panels:

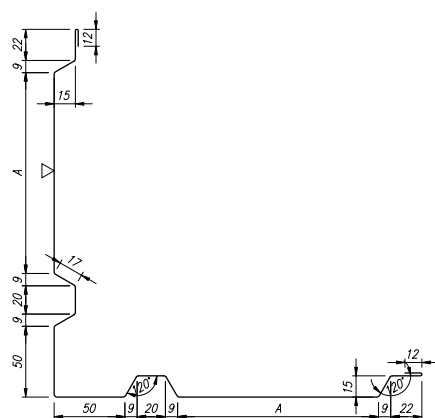
PolTherma CS / X

PolTherma DS

PolTherma PS

PolTherma TS / X

ThermaStyle PRO

**Outer cassette angle**

Cat.-No.: 018

For panels:

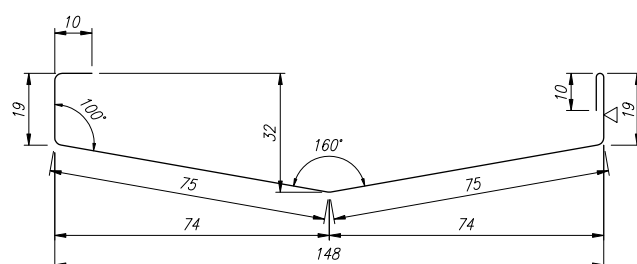
PolTherma CS / X

PolTherma DS

PolTherma PS

PolTherma TS / X

ThermaStyle PRO

**Joint strip
(hidden connectors)**

Cat.-No.: 019A

For panels:

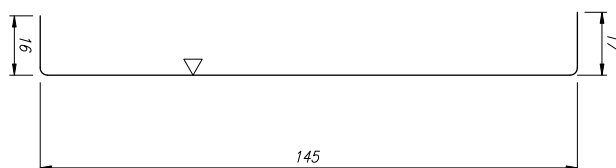
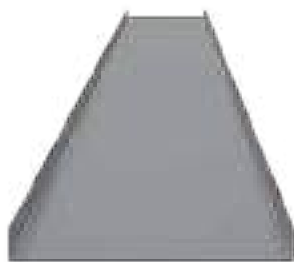
PolTherma CS / X

PolTherma DS

PolTherma PS

PolTherma TS / X

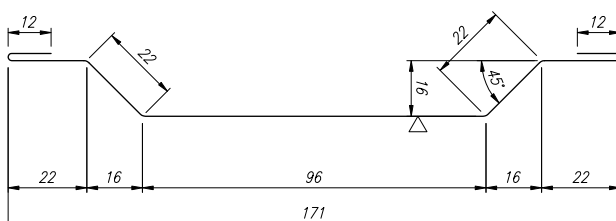
ThermaStyle PRO



Joint strip (hidden connectors) mounting bracket

Cat.-No.: 019B

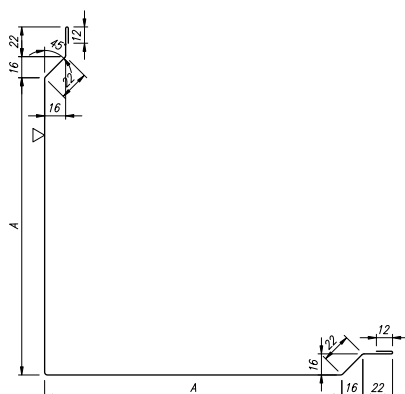
For panels:
PolTherma CS / X
PolTherma DS
PolTherma PS
PolTherma TS / X
ThermaStyle PRO



Flat joint strip

Cat.-No.: 019

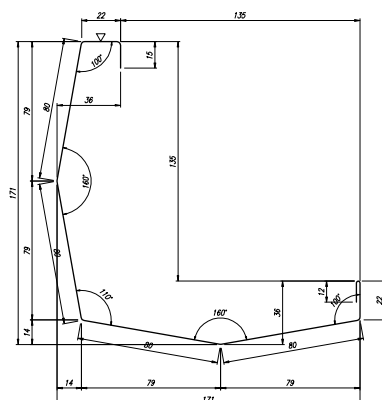
For panels:
PolTherma CS / X
PolTherma DS
PolTherma PS
PolTherma TS / X
ThermaStyle PRO



Corner flat angle

Cat.-No.: 020

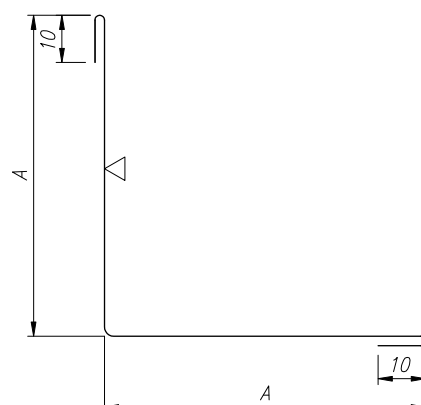
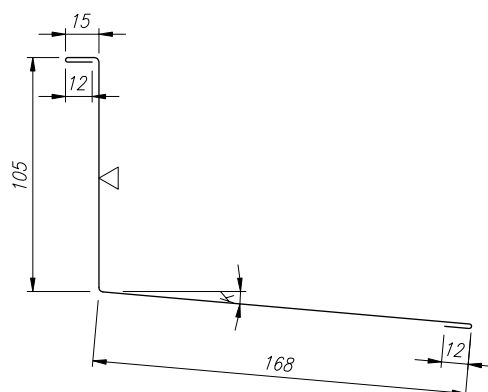
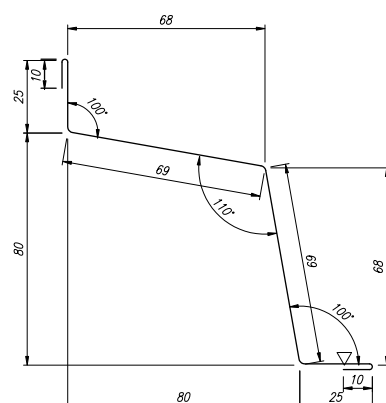
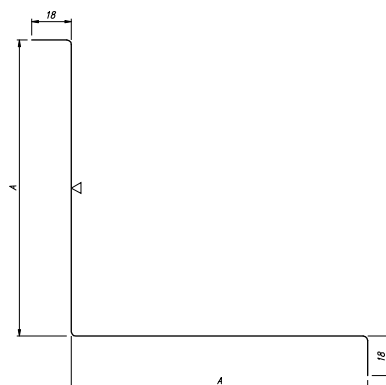
For panels:
PolTherma CS / X
PolTherma DS
PolTherma PS
PolTherma TS / X
ThermaStyle PRO



Joint strip (hidden fasteners)

Cat.-No.: 020A

For panels:
PolTherma CS / X
PolTherma DS
PolTherma PS
PolTherma TS / X
ThermaStyle PRO



External angle (hidden fasteners) mounting bracket

Cat.-No.: 020B

For panels:

PolTherma CS / X

PolTherma DS

PolTherma PS

PolTherma TS / X

ThermaStyle PRO

Inner plinth flashing

Cat.-No.: 022

For panels:

PolTherma CS / X

PolTherma DS

PolTherma PS

PolTherma TS / X

ThermaStyle PRO

Attic strip

Cat.-No.: 032

For panels:

PolTherma CS / X

PolTherma DS

PolTherma PS

PolTherma TS / X

ThermaStyle PRO

Symmetrical inner angle

Cat.-No.: 033

For panels:

PolTherma CS / X

PolTherma DS

PolTherma PS

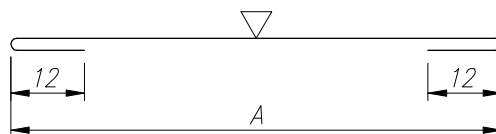
PolTherma TS / X

ThermaStyle PRO

Contact strip - masking

Cat.-No.: 035

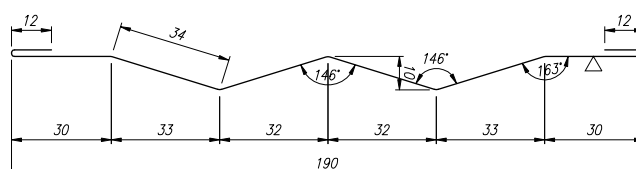
For panels:
 PolTherma CS / X
 PolTherma DS
 PolTherma PS
 PolTherma TS / X
 ThermaStyle PRO



Oblique contact strip

Cat.-No.: 019

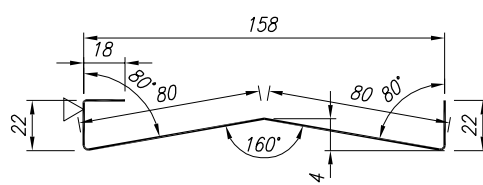
For panels:
 PolTherma CS / X
 PolTherma DS
 PolTherma PS
 PolTherma TS / X
 ThermaStyle PRO



Mounting strip

Cat.-No.: 020

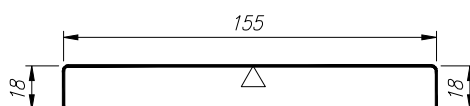
For panels:
 PolTherma CS / X
 PolTherma DS
 PolTherma PS
 PolTherma TS / X
 ThermaStyle PRO

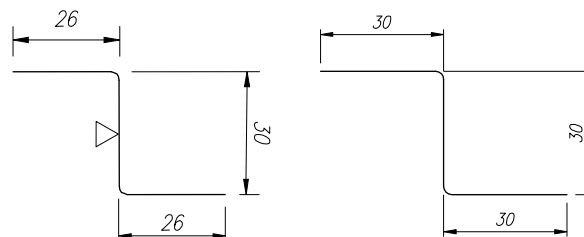
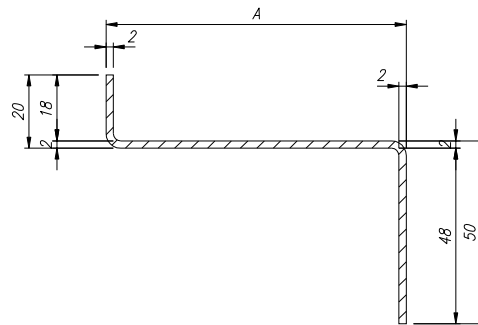
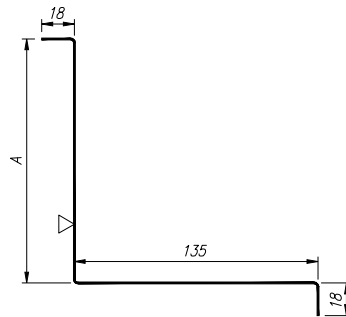
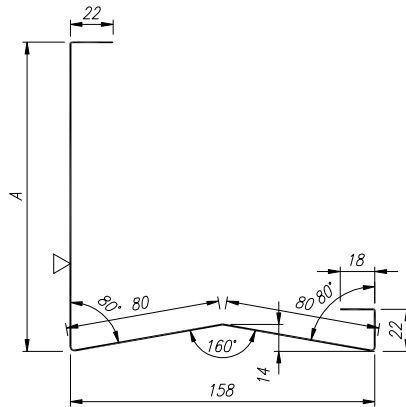


Mounting strip - base

Cat.-No.: 045

For panels:
 PolTherma CS / X
 PolTherma DS
 PolTherma PS
 PolTherma TS / X
 ThermaStyle PRO





Cat.-No.: 046

For panels:
 PolTherma CS / X
 PolTherma DS
 PolTherma PS
 PolTherma TS / X
 ThermaStyle PRO

Cat.-No.: 047

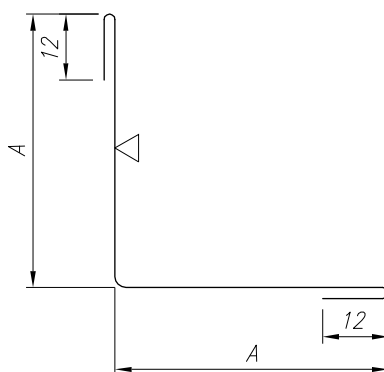
For panels:
 PolTherma CS / X
 PolTherma DS
 PolTherma PS
 PolTherma TS / X
 ThermaStyle PRO

Cat.-No.: 048

For panels:
PolTherma DS
PolTherma PS

For flashings:
005A

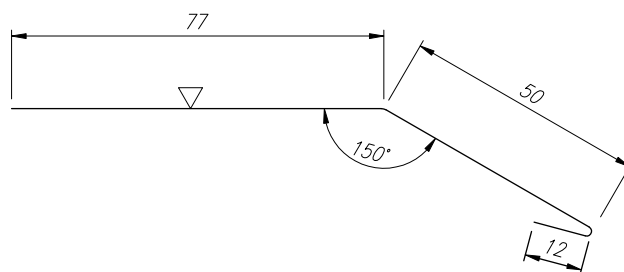
For flashings:
009A



Inner angle

Cat.-No.: 001

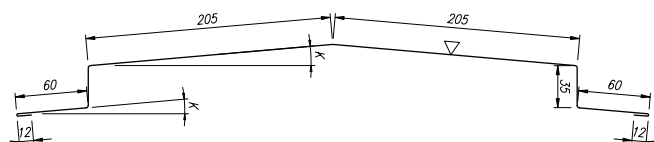
For panels:
PolDeck TD
ThermaDeck PRO



Drip cap

Cat.-No.: 003

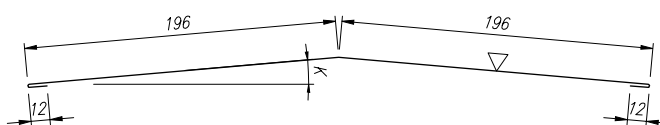
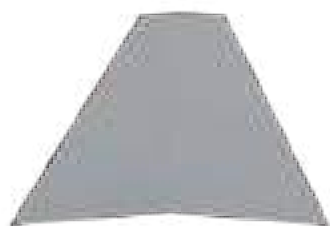
For panels:
PolDeck TD
ThermaDeck PRO



External ridge

Cat.-No.: 005

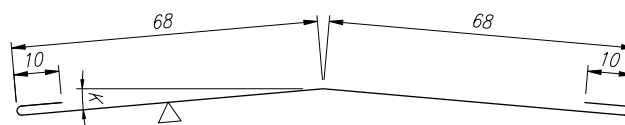
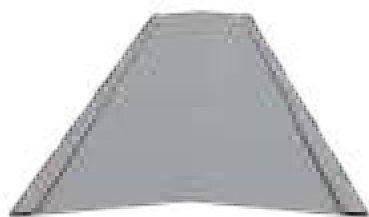
For panels:
PolDeck TD / MD
ThermaDeck PRO



External ridge (with Z-profile)

Cat.-No.: 005A

For panels:
ThermaDeck PRO

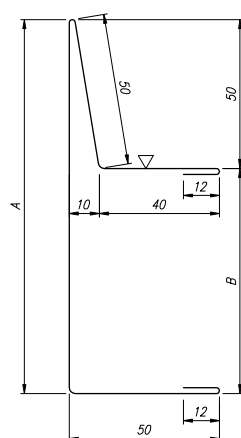
**Inner ridge**

Cat.-No.: 006

For panels:

PolDeck TD

ThermaDeck PRO

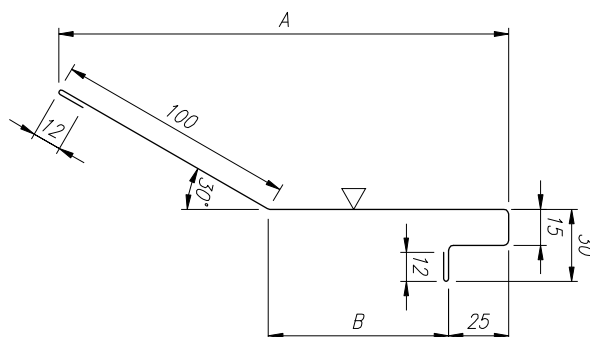
**Top bracket
(masking element)**

Cat.-No.: 007

For panels:

PolDeck TD

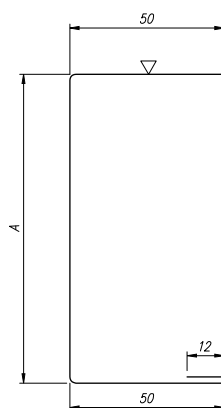
ThermaDeck PRO

**Top bracket
(masking element)**

Cat.-No.: 007A

For panels:

ThermaDeck PRO

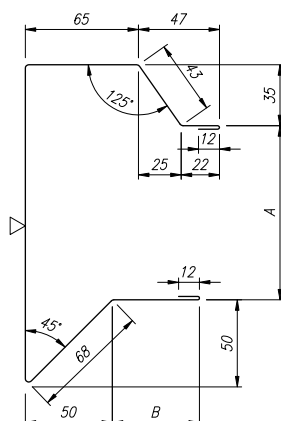
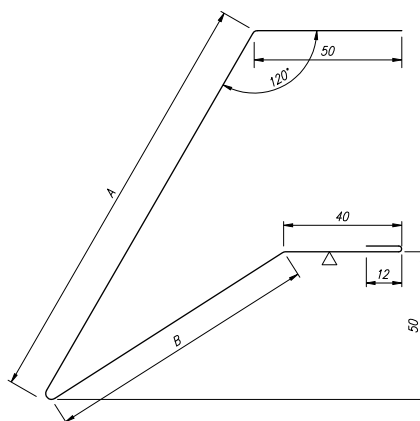
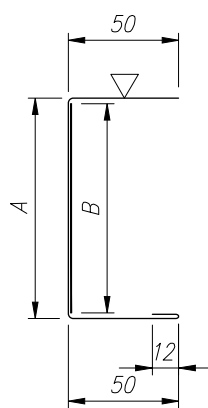
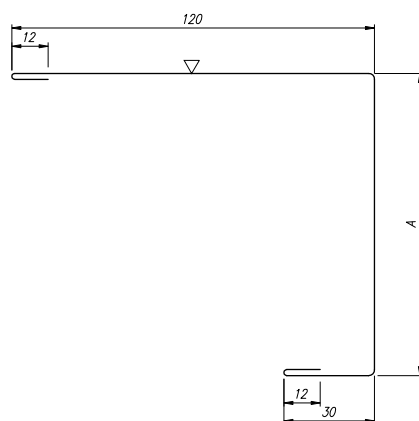
**Panel closing C-profile**

Cat.-No.: 009

For panels:

PolDeck TD

ThermaDeck PRO



Panel closing C-profile

Cat.-No.: 009A

For panels:
ThermaDeck PRO

Panel closing C-profile

Cat.-No.: 009B

For panels:
PolDeck TD
ThermaDeck PRO

Drip cap

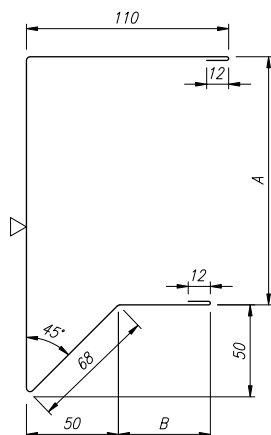
Cat.-No.: 011

For panels:
PolDeck TD
ThermaDeck PRO

Closing strip

Cat.-No.: 024

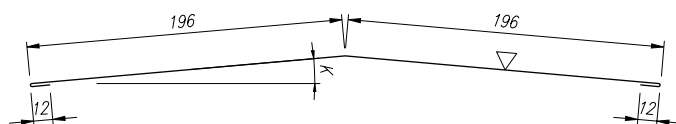
For panels:
PolDeck TD

**Closing strip**

Cat.-No.: 025

For panels:

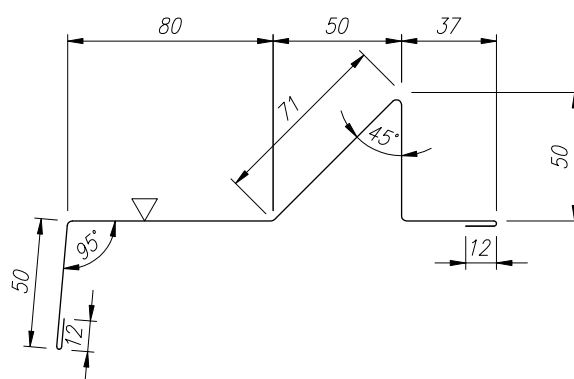
PolDeck TD

**External ridge**

Cat.-No.: 027

For panels:

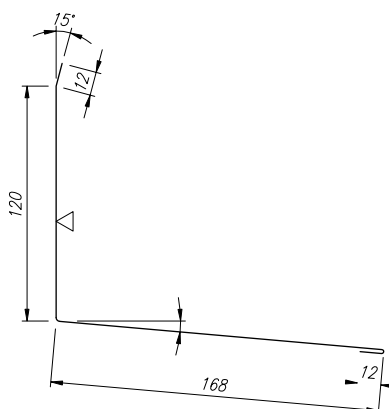
PolDeck TD / MD

**Eave strip**

Cat.-No.: 028

For panels:

PolDeck TD / MD

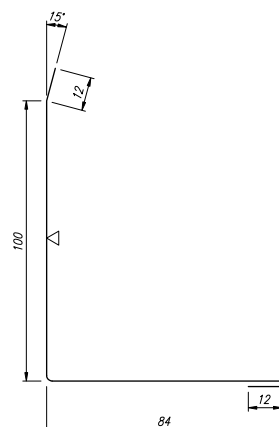
**Attic strip**

Cat.-No.: 030

For panels:

PolDeck TD / MD

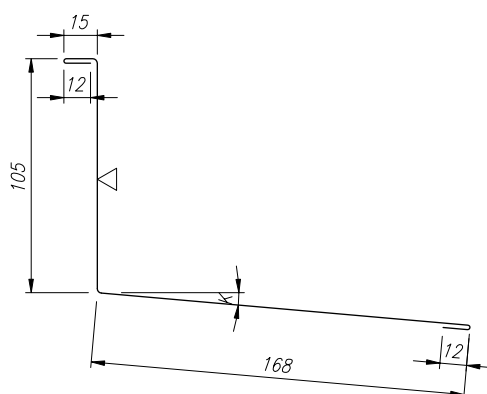
ThermaDeck PRO



Attic strip

Cat.-No.: 031

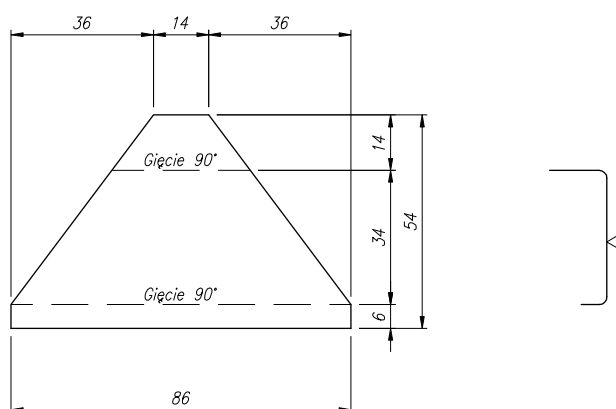
For panels:
PolDeck TD / MD
ThermaDeck PRO



Attic strip

Cat.-No.: 032

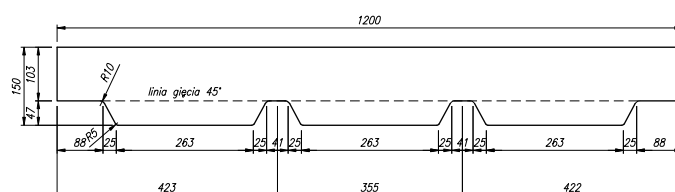
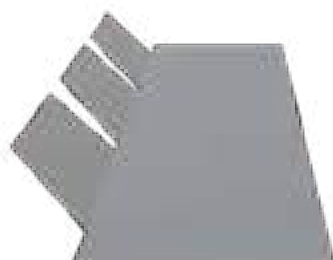
For panels:
PolDeck TD / MD
ThermaDeck PRO



End cap

Cat.-No.: 034

For panels:
PolDeck TD / MD



Ridge bar

Cat.-No.: 038

For panels:
PolDeck TD / MD

COLOURS OF CLADDING

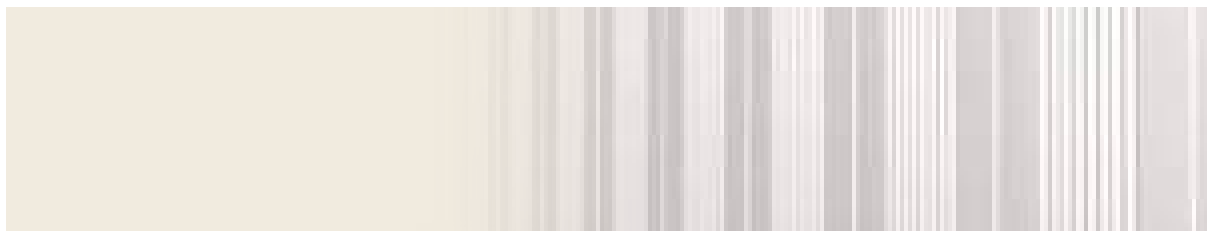
The cladding colours available in the Europanel offer have been classified, on the basis of their relative brightness specified in PN-EN 14509, into three groups. The belonging of exemplary colours to individual groups depends on the accumulation of solar energy on their surface in relation to its reflection from the surface of magnesium oxide. Due to the possibility of increased heating of the surface of the boards during periods of strong sunshine, we recommend the use of bright colors (groups I and II) for external boards, and for roofing boards in particular.

The following colours are only illustrative - actual products may vary slightly.

Available colours:

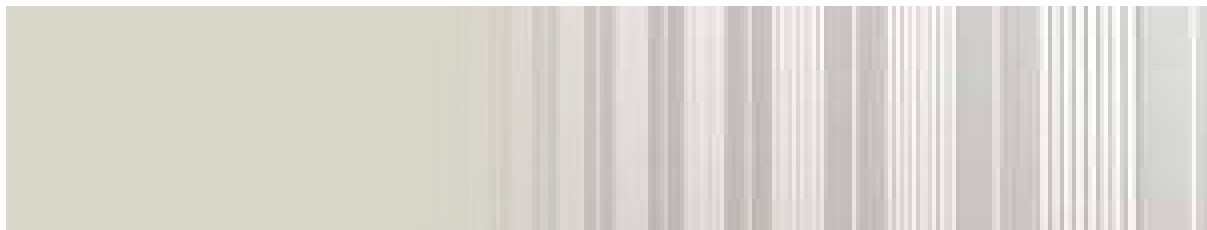
RAL 9010

white
group I (very bright)



RAL 9002

gray-white
group I (very bright)



RAL 7035

light grey
group I (very bright)



RAL 9006

silver metallic
group II (bright)



RAL 9007

grey aluminium
group III (dark)



RAL 3009

oxide red
group III (dark)

**RAL 7016**

anthracite grey
group III (dark)

**RAL 6029**

mint green
group III (dark)

**RAL 5010**

blue
group III (dark)

**RAL 7024**

gray graphite
group III (dark)

**RAL 8017**

chocolate-brown
group III (dark)

**RAL 8004**

brick-red
group III (dark)

**RAL 3011**

red
group III (dark)



INNOVATIVE CLADDING COLOURS

If you dream of a facade that attracts attention and at the same time allows you to save on additional elements, our claddings are the perfect solution for you. Choose natural patterns that will give your facility a unique character.

Choose from wood-like and stone-like claddings in a wide range of shades. Our products combine aesthetics and functionality.

Don't wait! If you are interested, write to us or call us. Our team will be happy to answer all your questions and help you choose the best solution for your facility.

BROWN OAK



WALNUT



SONOMA OAK

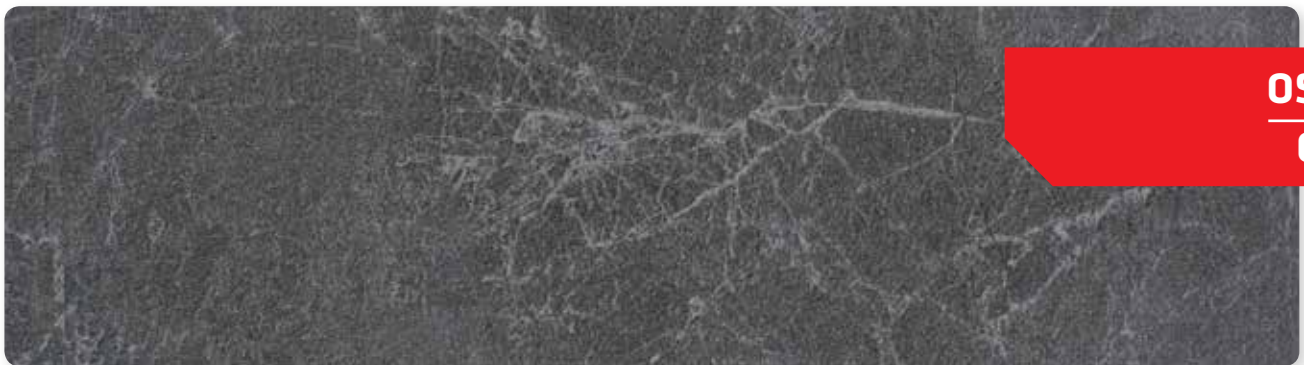




LIME
STONE BEIGE



LIME
STONE GRAY



OSAKA
GRAY



SAND
STONE

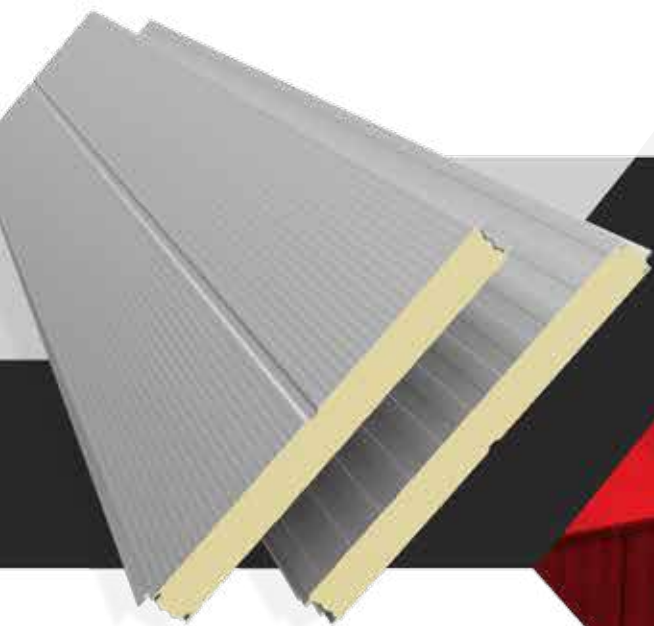


GRAY
TERRAZZO



INOWROCŁAW

WŁOCŁAWEK

**PU
manufacturing
plant**Latkowo 35
88-100 Inowrocław**EPS
manufacturing
plant**ul. Toruńska 85
87-800 Włocławek**Contact:**
export@europanels.pl

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