

Sandwich panels from Gór-Stal

SANDWICH PANELS GS MW

WITH ROCK WOOL CORE

**MATERIAL ENSURING
MAXIMUM FIRE PROTECTION**



Sandwich Panel Factory, Gorlice

Sandwich panels GS MW

SANDWICH PANEL MANUFACTURER

Long-standing experience in the marketplace that guarantees top quality

Gór-Stal has been present in the construction materials manufacturing market since 2003. As it has more than a dozen years' experience in the segment, it is capable of delivering solutions for the residential construction market, for industrial construction as well as the agricultural sector. Two manufacturing facilities offer a wide range of modern sandwich panels and insulation boards. The sandwich panels comprise cores made of PIR foam or mineral rock wool.

Initially, the company's staff included several employees, but their number gradually increased. A new production line that was installed 3 years after the company's establishment had a tremendous effect on the company's expansion. It became necessary to hire new staff. Thus 25 new staff were employed in the sale department, maintenance department and in the warehouse.

In 2007 in Gorlice production of sandwich panels with a polyurethane core was started. The company's expanded operations contributed to a quick increase in employment. At present the company's headcount exceeds 200 staff. The product range offered is intended for industrial sheds, large retail facilities, office buildings, cold stores, deep freeze stores as well as livestock buildings. The company's products are appreciated by designers, contractors and project owners.

What sets Gór-Stal products apart is, above all, suitability for quick and easy installation as well as installation in adverse weather conditions. Additional advantages include low project delivery costs and the modern and universal character of the panel system. These properties make Gór-Stal panels the best construction material.

One of the key functions carried out by the company is purchasing raw materials from the most reputable global suppliers, mostly from Western Europe. PIR foam is the basic component used in sandwich panel manufacture. No sandwich panels or insulation boards could

be manufactured if such foam were not available. This type of foam is manufactured according to Gór-Stal's original and unique formulation. Another raw material necessary for panel manufacture is mineral rock wool featuring a very good fire resistance rating. Gór-Stal continuously expands its product range by implementing new technologies and offering solutions adapted to the needs of even the most demanding customers.



Sandwich panels GS MW

SANDWICH PANELS WITH ROCK WOOL

Guarantee of the highest fire resistance!

Sandwich panels GS MW

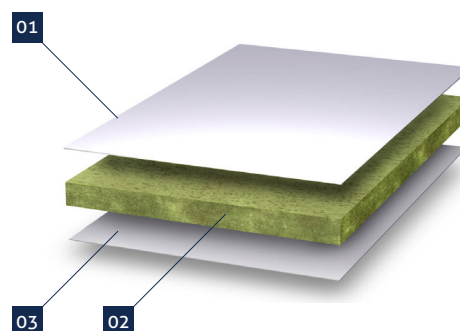
Being committed to satisfying customer requirements, the company Gór-Stal has expanded its product offering to include sandwich panels with mineral rock wool cores.

Having launched its modern production line, Gór-Stal can now offer sandwich panels which are fully compatible with GS insPIRe sandwich panels featuring PIR type polyurethane cores in terms of interlocking joints and profiling.

New panels - with a rock wool core:

- **GS MW S** - with exposed fasteners
- **GS MW U** - with concealed fasteners
- **GS MW CH** - with exposed fasteners

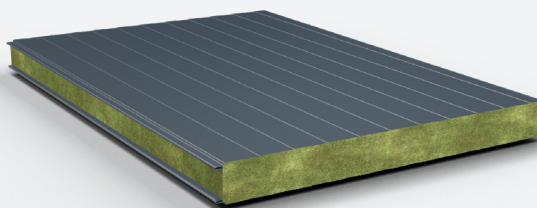
A sandwich panel is composed of two steel sheet facings, galvanized on both sides according to EN 10346, and coated with organic polyester coating with a coat thickness of 25 µm. The core is made of mineral rock wool with A1 fire rating. A double interlocking joint that joins the panels ensures high level of integrity. Panels with rock wool cores are a non-combustible material so they can be used for separations with higher fire resistance requirements. Thanks to very good sound insulation properties, the panels ensure adequate soundproofing for buildings.



- 01. outer layer – profiled steel sheet
- 02. rock wool core
- 03. inner layer – profiled steel sheet

GS MW S

wall panel with a mineral rock wool core



Information about the panel:

GS MW S wall panels are intended for the construction of external and internal walls on a building frame. Steel sheet galvanized on both sides according to EN 10346 and coated with an organic polyester coating with a coat thickness of 25 µm is used as facing. The panels can be installed both in a vertical and horizontal arrangement. They ensure maximum fire protection and excellent sound reduction.

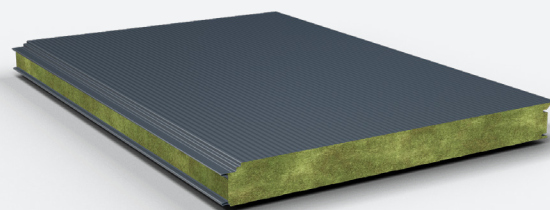
GS MW S wall panel with a mineral rock wool core (standard fastener)

Declared heat transfer coefficient λ_D		0,044
Thickness [mm]		80
Weight* [kg/linear m] for 0,5/06 mm facing	1000 mm module	17,9
	1140 mm module	20,3
Ratio $U_{d,s}$ [W/m²K]		0,54
Modular width [mm]		1000 / 1140
Exterior lining profiling	1000 mm module	L - Linear, M - Microfiltered, F - Wavy, R - Grooved, P - Flat
	1140 mm module	L - Linear, M - Microfiltered, F - Wavy, P - Flat
Interior lining profiling		L - Linear
Reaction to fire (for all end-use applications)		A2-s1,d0
Fire spread		NRO
Resistance to fire		EI 60
Water vapour permeability		„Complies“ (impervious)
Sound insulation		31(-1;-3)
Approvals and certificates		EN 14509:2013, , ISO 14001

* A table with panel weights and the other corresponding facing thickness values are available in the Technical Department.

GS MW U

wall panel with a mineral rock wool corej



Information about the panel:

GS MW U wall panels are intended for the construction of external and internal walls on a building frame. Concealed fasteners, which cannot be seen if viewed from the facade, contribute to panels being architecturally attractive and functional. Steel sheet galvanized on both sides according to EN 10346 and coated with an organic polyester coating with a coat thickness of 25 µm is used as facing. The panels can be installed both in a vertical and horizontal arrangement. They ensure maximum fire protection and excellent sound reduction.

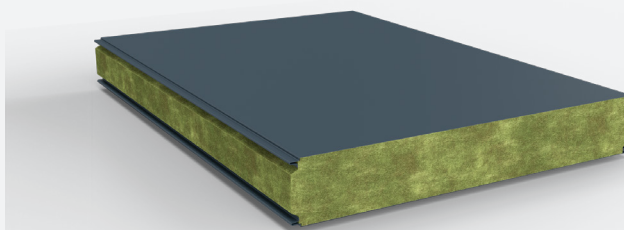
GS MW U wall panel with a mineral rock wool core (concealed fastener)

Declared heat transfer coefficient λ_0		0,044		
Thickness [mm]		80	100	120
Weight* [kg/linear m] for 0,5/06 mm facing	1000 mm module	18,2	20,3	22,4
	1140 mm module	-	-	-
Ratio $U_{0,5}$ [W/m²K]		0,56	0,44	0,37
Modular width [mm]		1000		
Exterior lining profiling		L - Linear, M - Microfiltered, F - Wavy, R - Grooved, P - Flat		
Interior lining profiling		L - Linear		
Reaction to fire (for all end-use applications)		A2-s1,d0		
Fire spread		NRO		
Resistance to fire		NPD		
Water vapour permeability		„Complies“ (impervious)		
Sound insulation		NPD		32(-2;-3)
Approvals and certificates		EN 14509:2013, , ISO 14001		

* A table with panel weights and the other corresponding facing thickness values are available in the Technical Department.

GS MW CH

wall panel with a mineral rock wool core



Information about the panel:

Panels with GS MW S with a refrigerating joint are intended for the construction of external and internal walls on a building frame. Steel sheet galvanized on both sides according to EN 10346 and coated with an organic polyester coating with a coat thickness of 25 µm is used as facing. The panels can be installed both in a vertical and horizontal arrangement. They ensure maximum fire protection and excellent sound reduction.

GS MW CH wall panel with a mineral rock wool core (standard fastener)

Declared heat transfer coefficient λ_D		0,044			
Thickness [mm]		100	120	160	200
Weight* [kg/linear m] for 0,5/06 mm facing	1000 mm module	20,0	22,1	26,3	30,5
	1140 mm module	22,7	25,1	29,9	34,7
Ratio $U_{d,s}$ [W/m²K]		0,43	0,36	0,27	0,22
Modular width [mm]		1000 / 1140			
Exterior lining profiling	1000 mm module	L - Linear, M - Microfiltered, F - Wavy, R - Grooved, P - Flat			
	1140 mm module	L - Linear, M - Microfiltered, F - Wavy, P - Flat			
Interior lining profiling		L - Linear			
Reaction to fire (for all end-use applications)		A2-s1,d0			
Fire spread		NRO			
Resistance to fire		EI 60		EI 120	
Water vapour permeability		„Complies“ (impervious)			
Sound insulation		31(-2;-3)			
Approvals and certificates		EN 14509:2013, , ISO 14001			

* A table with panel weights and the other corresponding facing thickness values are available in the Technical Department.



Sandwich panels GS MW

AVAILABLE PROFILES

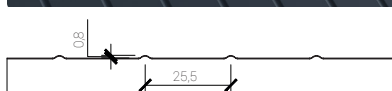
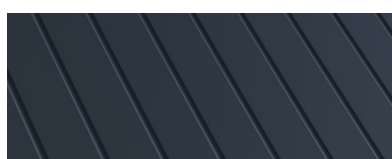
Aesthetically pleasing and unique design for your project

PSandwich panels have galvanized facings, profiles on both sides and coated with a coating available in a wide range of colours available. This makes it possible to design a building facade with modern and unique appearance. That is why, in order to meet the requirements of the most

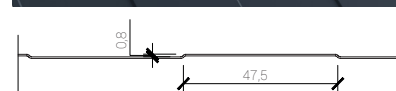
demanding customers, G6r-Stal offers panel profiling options. The options are available in five patterns, providing architects with extensive design opportunities.



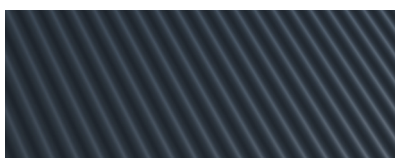
P - Flat



R - Grooved



L - Linear



F - Wavy



M - Microfiltered

	External profiling					Internal profiling	
Thickness	P	R	L	F	M	P	L

GS MW S

Exterior lining profiling for 1000 mm module

S 80	■	■	■	■	■		■
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Exterior lining profiling for 1140 mm modular

S 80	■		■	■	■		■
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GS MW U

U 100	■	■	■	■	■		■
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U 120	■	■	■	■	■		■
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U 140	■	■	■	■	■		■
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GS MW CH

Exterior lining profiling for 1000 mm module

CH 100	■	■	■	■	■		■
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CH 120	■	■	■	■	■		■
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CH 160	■	■	■	■	■		■
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CH 200	■	■	■	■	■		■
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Exterior lining profiling for 1140 mm modular

CH 100	■		■	■	■		■
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CH 120	■		■	■	■		■
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CH 160	■		■	■	■		■
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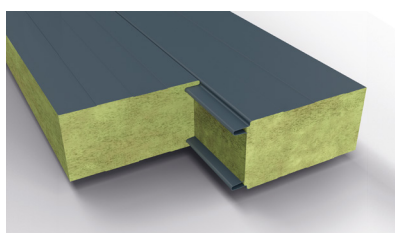
CH 200	■		■	■	■		■
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Sandwich panels GS MW

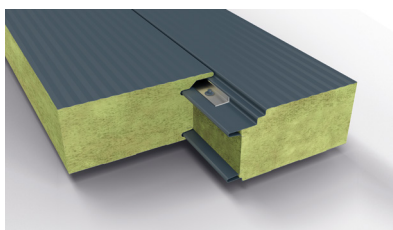
JOINTS AND JOINING OF PANELS

Easy installation and increased thermal performance thanks to profiled edges

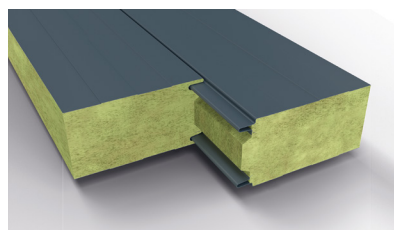
Sandwich panels meet strict requirements relating to fire resistance and sound insulation. Thanks to precisely shaped joints as well as appropriately profiled edges they improve thermal performance and break thermal bridges. Easy and quick installation is made possible by a tongue and groove joint with a double interlocking joint in wall panels.



Interlocking joint for a GS MW S panel



Interlocking joint for a GS MW U panel



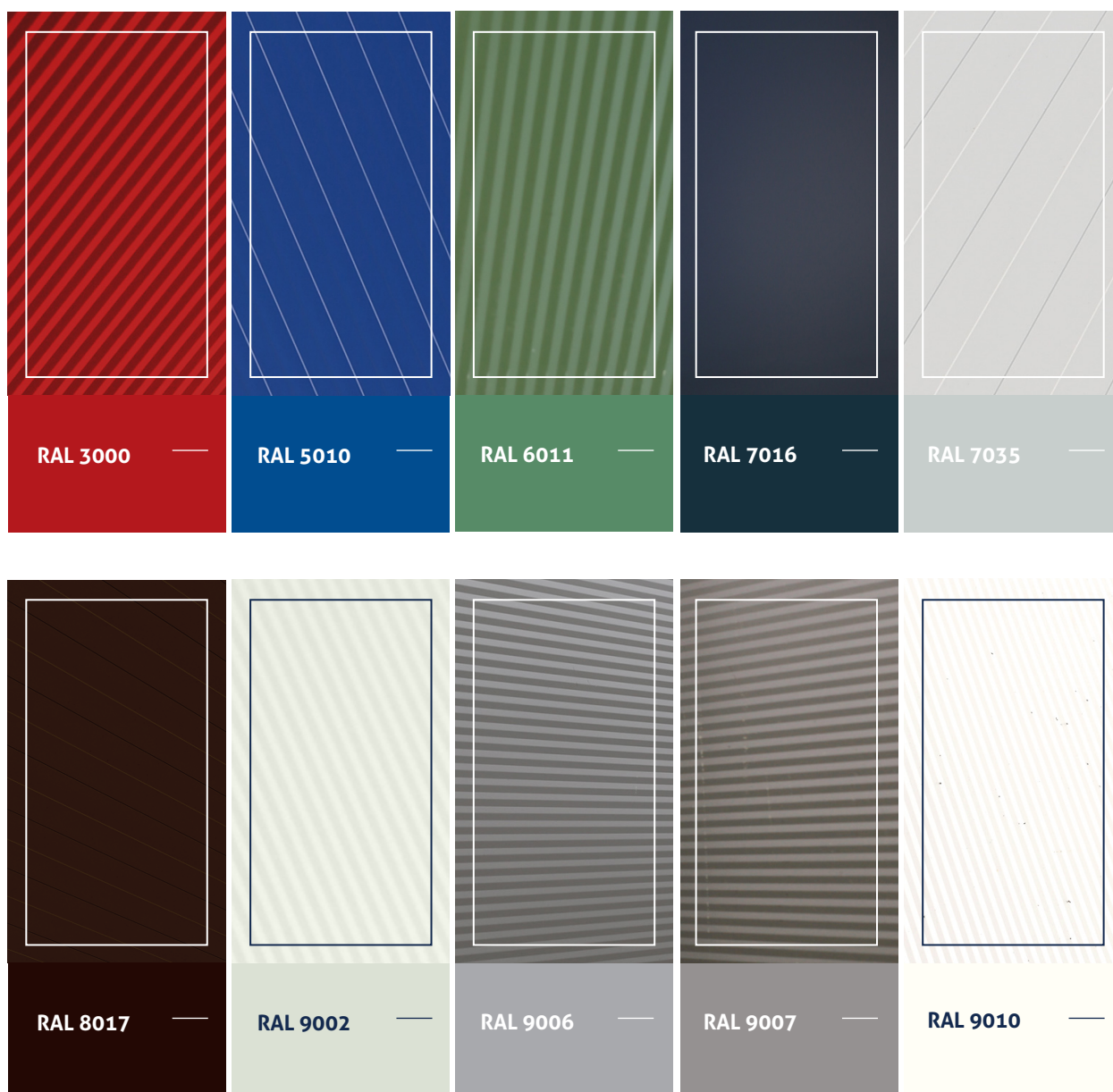
Interlocking joint for a GS MW CH panel

STANDARD COLOURS FOR FACINGS

Your facade need not be dull

The colour scheme of a building should not only be functional and aesthetically pleasing but should also have an effect on the observer's emotions and subconsciousness. The appearance of a facade is expected to attract attention and make the building stand out against other structures. That is why GóR-Stal, in an effort to meet the expectations of architects and customers, offers a wide palette of colours available, depending the thickness of panel facings. This provides the opportunity to develop an original and unique architectural

design which will satisfy the project owners. Below are shown standard facing colours. For more information on other colours available please contact our sales representatives.



Note:

Depending on the quality of print / VDU, actual colours may vary. RAL colour charts with steel sheet colours are available from our sales representatives.

RAL 3000	RAL 5010	RAL 6011	RAL 7016	RAL 7035	RAL 8017	RAL 9002	RAL 9006	RAL 9007	RAL9010
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GS MW S

Standard exterior lining colors for 1000 mm modular widths

S 80										
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Standard exterior lining colors for 1140 mm modular widths

S 80										
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GS MW U

Standard exterior lining colors

U 80										
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U 100										
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U 120										
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GS MW CH

Standard exterior lining colors for 1000 mm modular widths

CH 100										
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CH 120										
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CH 160										
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CH 200										
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Standard exterior lining colors for 1140 mm modular widths

CH 100										
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CH 120										
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CH 160										
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CH 200										
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Standard interior lining colors

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Sandwich panels GS MW

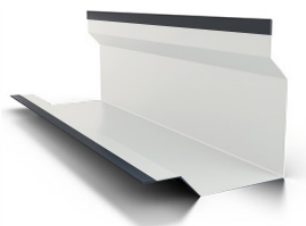
SYSTEM FLASHINGS

Necessary architectural details

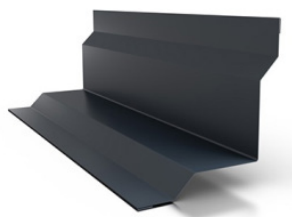
Flashings manufactured by Gór-Stal are part of the sandwich panel system. In addition, they are used as independent finishing accessories. Gór-Stal has a profiling machine capable of making flashings with standard thickness of* 0,5 mm, 0,7 mm and 1,0 mm. Flashings are made from galvanised steel sheet with the colour matching that of the panel facing, and additionally are coated with a polyester coating (coat thickness up to 0,7 mm).

The company's product offering includes more than 40 standard flashings; customers can also place orders for customised flashings. The minimum length of a flashing is 2 linear metres, while maximum is 6,0 linear metres. In order to protect flashings against damage, the upper surface is covered with a foil sheeting. Flashings and other technical

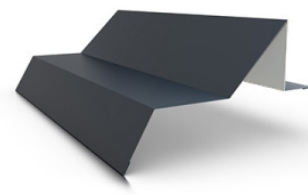
solutions included in our offering meet the highest standards in terms of insulation performance. For more information, just contact us. We guarantee that you will be satisfied with your purchase. Below are shown example flashings. Please take a look at our detailed offering.



Outer corner concealing fasteners



Inner corner concealing fasteners



Snow guard – drip edge

* Maximum sheet thickness is 1,0 mm for lengths up to 6,0 m, and for standard shapes included in the catalogue and, according to the customer's individual design.

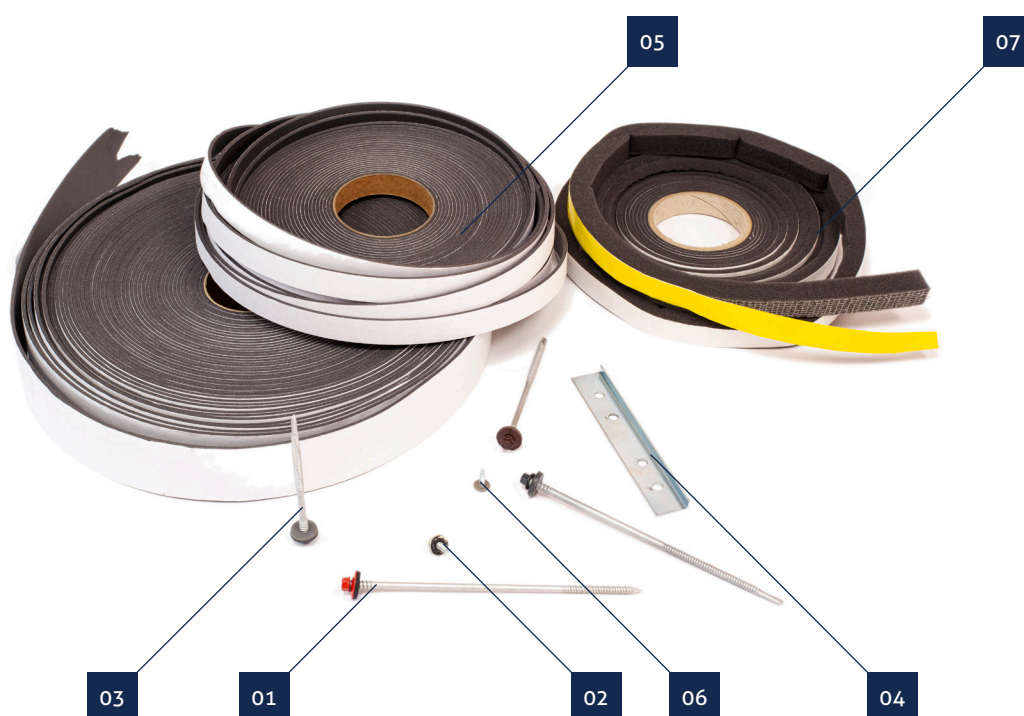
ACCESSORIES

Components for sandwich panel installation

Gór-Stal offers its customers necessary accessories for sandwich panel installation:

- self-adhesive, polyurethane (PUS and PURS), polyethylene (PES), and butyl sealing tapes.
- self-drilling screws in colours matching those of panel facings for steel, concrete and wooden structures
- sloping polycarbonate skylights - a number of installation accessories for refrigeration panels

Detailed information on our accessories for sandwich panel installation can be found in technical catalogues available on our website www.gor-stal.pl or from our sales representatives.



Legend:

- | |
|---|
| 01. Screw for concrete and wood |
| 02. Washer head screw for joining steel sheets (a pin screw) |
| 03. Screw for steel |
| 04. PM1 washer |
| 05. PES Tape |
| 06. Screw with hexagonal head for joining steel sheets (a farmer screw) |
| 07. PURS expanding tape |



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CONTACT

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