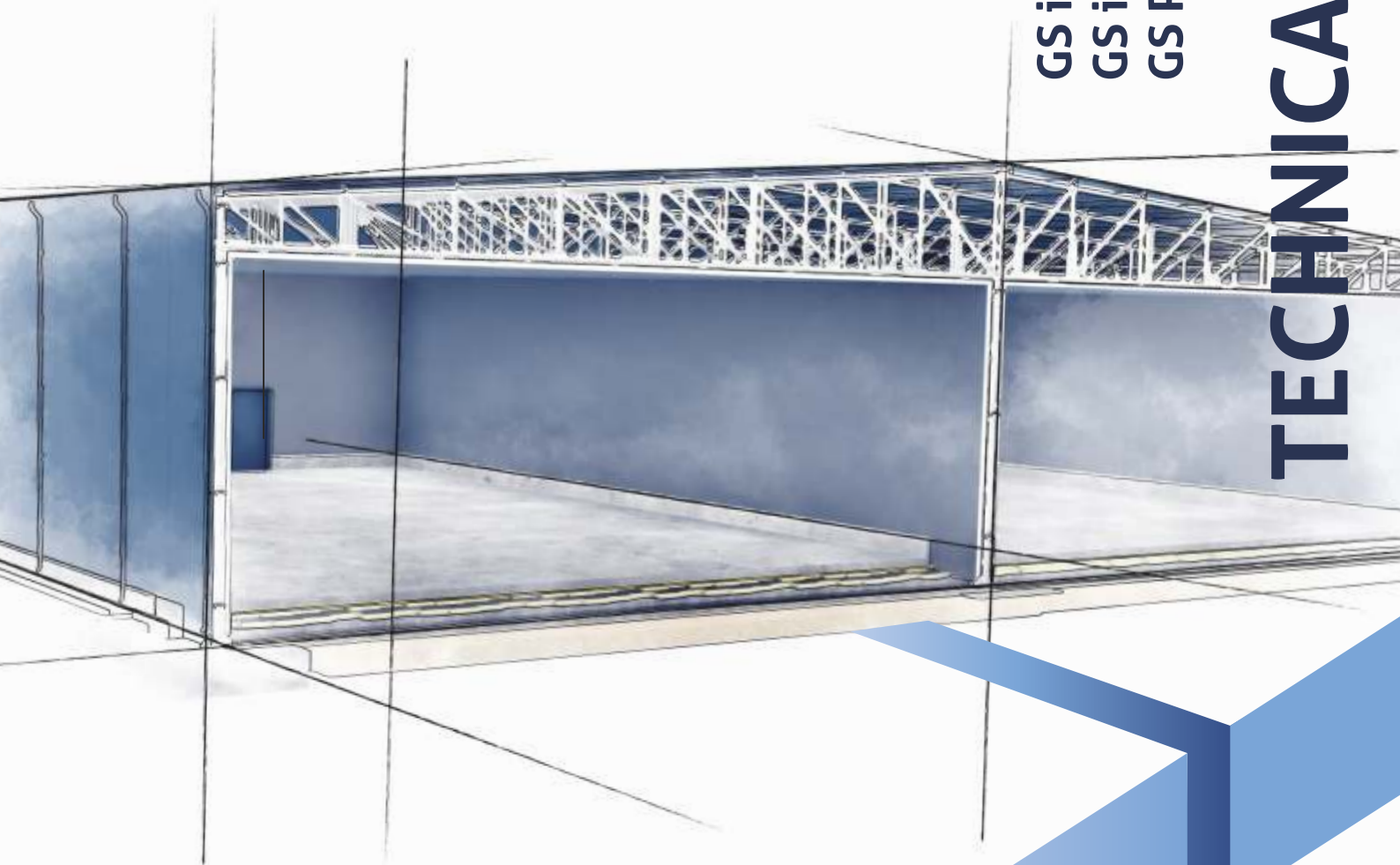


GS insPIRe® S / GS insPIRe® S MAX
GS insPIRe® U GS insPIRe® U MAX
GS PIR D / GS-PIR D MAX

TECHNICAL CATALOGUE



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▷ INTRODUCTION

This publication is intended to present an assortment and technical properties of sandwich panels to our customers. With over a decade of experience and extensive knowledge we perfectly know the needs of the market. As a result, we create products and solutions that give our customers real benefits.

▷ ABOUT THE COMPANY

Gór-Stal® is a Polish company founded in 2003. It had originally produced and sold finished steel construction elements. The increase in demand for building materials for light industrial facilities forced co-owners to buy the line for the production of sandwich panels with a polyurethane core. It is one of the most modern and technologically advanced production lines in Europe. Gór-Stal® manufactures **sandwich panels** and **termPIR® insulating boards**. Sandwich panels are commonly used building materials for light cladding of industrial halls, warehouses, production halls and commercial buildings, offices, administrative buildings, freezers and cold storages. Since the beginning of the company's operation it has rapidly developed and extensively expanded its operations both geographically and in terms of product offerings. Gór-Stal® is recognized by customers in Poland, Czech Republic, Austria, Romania, Belgium, the Netherlands, Luxembourg, Great Britain, France, Germany, Estonia and the Nordic countries, Slovakia, Hungary, Ukraine, Lithuania and Latvia. We currently have two factories, one in Gorlice and the other in Bochnia, where we manufacture termPIR® insulation boards.

▷ PRODUCTS

Gór-Stal® offers a wide range of modern wall, roof and coldstore sandwich panels **with polyisocyanurate (PIR) core**. Sandwich panels consist of two steel claddings and a structural insulation core of rigid, HCFC-free self-extinguishing PIR foam with very good thermal insulation. When building with sandwich panels, you can create a building with excellent insulation parameters, with a significant reduction in the thickness and weight. Speed and ease of assembly, possibility of carrying out the work even in difficult weather conditions, low cost of implementation and ease of wall cleaning, modernity and versatility of the system make sandwich panels the best building material. A wide range of colors and varied shape of panels profiles allow for the implementation of ambitious architectural projects. Gór-Stal® owes its leader position in the production of sandwich panels to high technological advancement of production lines, well-qualified team of employees and special attention to the quality of the products.

▷ STRUCTURE OF PANELS

Sandwich panels have one type of core ie. **polyisocyanurate (PIR) foam** with a density of **40 kg/m³ (+/-10%)** and thermal conduction coefficient **λ=0,022 W/m·K**. (for 2020 new panels will be available ie. MAX with a core and a coefficient of **λ=0,019 W/m·K**). Isocyanurate structures of PIR foams decompose at temperatures above **300 °C**. The carbonized layer protects against heat transition through the panel, which in turn provides an effective protection against fire. Sheet metal grade **S220-S280GD DIN EN 10346** galvanized on both sides with the organic polyester lacquer with a film thickness of **25 microns** is used as cladding of sandwich panels. Due to the increased anticorrosion requirements, it is possible to make panels with metal plate dedicated for environments **C4** and **C5**, and the prevailing aggressive environments inside the buildings. It is possible to use stainless steel **1.4301** coating. Panels are protected against mechanical damage that may occur during transport or installation with a protective foil.

▷ CERTIFICATES








Sandwich panel have the following certificates and technical approvals:

- Quality Management System certificate,
- CE declaration of conformity in accordance with **EN 14509**,
- Certificate of Constancy of Performance **EN 14509**, according to Regulation (EU) No **305/2011**,
- Classifications: fire resistance rating, reaction to fire, fire retardancy,
- **Hygienic Approval** - allows for use in, commercial, industrial, food processing, refrigeration facilities, residential and public buildings, including health services.

Current versions of the documents are available at: www.gor-stal.pl













Wall panel GS insPIRe® S



01	Type of core	Rigid polyisocyanurate foam (PIR)					
02	Density [kg/m³]	40 (+/-10%)					
03	Thickness [mm]	40	60	80	100	120	
04	Weight [kg/m²]*	10,0	11,0	11,8	12,6	13,4	
05	Maximum length [m]	16,5					
06	Total width [mm]	1000 / 1140 (for thick. ≥ 60 mm and lining profiling L, M and F)					
07	External lining profiling	L - Linear, M - Mikro-profiling, F - Wavy, R - Grooving, P - Flat					
08	Internal lining profiling	L - Linear, P - Flat					
09	Standard colours of external lining**	    					
10	Standard colours of internal lining**	 					
11	Coefficent U ₄₅ [W/m²K]	PIR core	0,60	0,38	0,28	0,22	0,19
		PIR MAX core	-	-	0,24	0,19	0,16
12	Fire propagation/Fire classification	NRO/B-s1, d0					
13	Fire resistance***	-			EI 20		EI 30
14	Certificates, approvals, seals of approval	DWU CE according to EN 14509, Hygienic Certificate, Certificate of Business Continuity EN 14509, Fire resistance classification					

Wall panel GS insPIRe® U



01	Type of core	Rigid polyisocyanurate foam (PIR)					
02	Density [kg/m ³]	40 (+/-10%)					
03	Thickness [mm]	60	80	100	120	140	
04	Weight [kg/m ²]*	11,3	12,1	12,9	13,7	14,5	
05	Maximum length [m]	16,5					
06	Total width [mm]	1000					
07	External lining profiling	L - Linear, M -Mikro-profiling, F - Wavy, R - Grooving, P - Flat					
08	Internal lining profiling	L - Linear, P - Flat					
09	Standard colours of external lining**						
							
10	Standardowe kolory okładziny wewnętrznej**	 					
11	Coefficient U ₄₅ [W/m ² K]	PIR core	0,44	0,29	0,23	0,19	0,16
		PIR MAX core	-	0,26	0,20	0,16	0,14
12	Fire propagation/Fire classification	NRO/B-s1, d0					
13	Fire resistance***	-		EI 15	EI 30		
14	Certificates, approvals, seals of approval	DWU CE according to EN 14509, Hygienic Certificate, Certificate of Business Continuity EN 14509, Fire resistance classification					

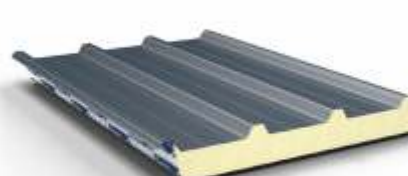
Coldstore Panel GS insPIRe® CH



more information in the Coldstore panels Catalogue or at www.gor-stal.pl

01	Type of core	Rigid polyisocyanurate foam (PIR)				
02	Density [kg/m³]	40 (+/-10%)				
03	Thickness [mm]	100	120	160	200	
04	Weight [kg/m²]*	12,6	13,4	15,0	16,6	
05	Maximum length [m]	16,5				
06	Total width [mm]	1000 / 1140 (for thick. ≥ 60 mm and lining profiling L, M and F)				
07	External lining profiling	L - Linear, M - Mikro-profiling, F - Wavy				
08	Internal lining profiling	L - Linear, P - Flat				
09	Standard colours of external lining**	RAL 9002 RAL 9010 RAL 9006 RAL 9007 RAL 7016				
10	Standard colours of internal lining**	RAL 9002 RAL 9010				
11	Coefficient U ₄₅ [W/m²K]	PIR core	0,22	0,18	0,14	0,11
		PIR MAX core	0,19	0,16	0,12	0,10
12	Fire propagation/Fire classification	NRO/B-s1, d0				
13	Fire resistance***	EI 30				
14	Certificates, approvals, seals of approval	DWU CE according to EN 14509, Hygienic Certificate, Certificate of Business Continuity EN 14509, Fire resistance classification				

Roof Panel GS PIR D



1	Type of core	Rigid polyisocyanurate foam (PIR)						
2	Density [kg/m³]	40 (+/-10%)						
3	Thickness [mm]	40/80	60/100	80/120	100/140	120/160	150/190	160/200
4	Weight [kg/m²]*	10,8	11,6	12,4	13,2	14,0	15,2	15,6
5	Maximum length [m]	16,5						
6	Total width [mm]	1000						
7	External lining profiling	T - Trapezoidal						
8	Internal lining profiling	L - Linear, G - Smooth						
9	Standard colours of external lining**	RAL 9002 RAL 9010 RAL 9006 RAL 9007 RAL 9010 RAL 7035 RAL 3000 RAL 6011 RAL 7016 RAL 8017						
10	Standard colours of internal lining**	RAL 9002 RAL 9010						
11	Coefficient U ₄₅ [W/m²K]	PIR core	0,55	0,37	0,27	0,22	0,18	0,15
		PIR MAX core	-	-	0,25	0,20	0,17	0,13
12	Fire propagation/Fire classification	B _{ROOF} /B-s1,d0						
13	Fire resistance***	- REI 30, RE 120						
14	Certificates, approvals, seals of approval	DWU CE according to EN 14509, Hygienic Certificate, Certificate of Business Continuity EN 14509, Fire resistance classification						

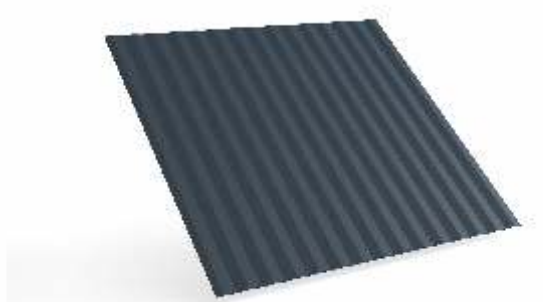
* panels with claddings 0,5/0,5 mm

** available colors depending on the thickness of the cladding, panels thicknesses and modular widths (details from the Sales Representative)

RAL 9002, 9010 colours are defined by Gór-Stal as white

*** conditions according to fire resistance classification

▷ PROFILATIONS



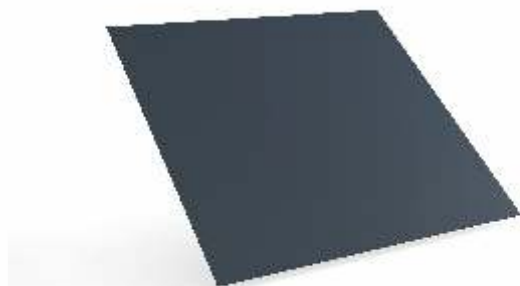
M - Mikro-profiling



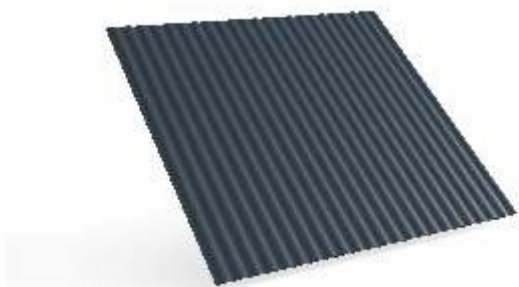
R - Grooving



L - Linear



P - Flat



F - Wavy



T - Trapezoidal

▷ PRODUCTION PROGRAM

The production program for sandwich panel systems includes the following items:

Wall sandwich panels:

GS insPIRe® S (standard cam-lock) - thickness: 40, 60, 80, 100 i 120 mm

GS insPIRe® U (hidden cam-lock) - thickness: 60, 80, 100, 120 i 140 mm

Roof sandwich panels:

GS PIR D (roof cam-lock) - thickness: 40/80, 60/100, 80/120, 100/140, 120/160, 150/190 i 160/200 mm

Coldstore panels:

GS insPIRe® CH (cold storage cam-lock) - thickness: 100, 120, 160 i 200 mm

Flashings: typical and custom made according to the client's design with a maximum length of 6m.

This publication provides detailed characteristics of sandwich panels.

▷ GUIDELINES FOR TRANSPORTATION

Sandwich panels are packed in batches. Loading and unloading of the batches may be done by means of forklift trucks or a lift equipped with an appropriate bar lifting sling, however:

- a single forklift truck may be used to move a package of panels with maximum length of **8 metres**,
- panels with length exceeding **8 m** need to be unloaded using a lift with a hoisting beam,
- if unloading panels using a lift with rope slings, use spacers to prevent panels from being crushed.

The transportation of sandwich panels shall be carried out by vehicles adapted for that purpose, while maintaining the following conditions:

- ensure unobstructed access on both sides of the trailer along its entire length,
- never stack panels more than two packages high
- complete support for a panel package must be provided along the entire length of the open load-carrying body,
- ensure there is sufficient clear space between panel packages, the load-carrying body and the cargo straps,
- the truck must be equipped with cargo straps. Place flexible separators underneath the cargo straps.
- When tightened, the straps must not deform the panels.

▷ GUIDELINES FOR MOUNTING

The sandwich panel manufacturer recommends that you use flashings and cam-locks delivered with the panels as part of the light sandwich panel system. When mounting the panels, follow the guidelines provided below:

- only cut plates and flashings with a fine-toothed circular saw machine or metal cutting scissors. **Never use grinding wheels.**
- cut the panels and flashings at a properly prepared station in order not to damage the lacquer and thin coatings,
- remove the protection foil after the panels have been installed,
- after installation thoroughly clean the surface of the panels, particularly off steel filings,

Typical panel mounting solutions are presented farther in this publication.

▷ TECHNICAL SUPPORT

We strive to deliver friendly and professional customer service. Our technical department and sales representatives assist designers, engineers and contractors in designing, ordering and selecting our products as well as installation thereof. Our customers are thus provided with active support from the design stage to the installation stage as well as prompt technical advisory service and cost calculation. The ordering and delivery process is coordinated by the **Customer Service Department (DOK)**.

For more information visit our website www.gor-stal.pl

▷ APPLICATION

GS insPIRe® S wall panel is designed for outer screening walls and inner partition walls in structural frame buildings. Panels can be mounted in both vertical and horizontal position, as single-span or multi-span wall elements.

▷ PHYSICAL PROPERTIES

GS insPIRe® S wall panel is produced in the five thicknesses of the core **40, 60, 80, 100 and 120 mm**. Panel facings are made of sheet metal galvanised on both sides according to **EN 10346** with organic polyester coating **25µm** thick. Thermal insulation core of the panels is a rigid polyisocyanurate (PIR) foam with a density of **40 kg/m³ (+/-10%)**. The heat conductivity calculation value of the foam is: $\lambda = 0,022 \text{ W/m}\cdot\text{K}$ (for 2020 new panels will be available **MAX** with a core and a coefficient of $\lambda = 0,019 \text{ W/m}\cdot\text{K}$). **Modular width** of plates is **1000 mm or 1140 mm**. The standard panel length is between **2.0 to 12 m**. On special request we deliver panels shorter than **2 m** and longer than **12 m**, with a maximum length of **16.5 meters**. Water and air tightness of panel joints is assured by impregnated polyurethane seals (**PUS**) applied in the manufacturing process.

Thickness [mm]	Weight [kg/m²]		Modular width [mm]	Length: typical/available [m]	Lining standard RAL colours	
	facings 0,5/0,5 mm**	facings 0,5/0,4 mm**			external linings*	internal linings*
40	10,0	9,1	1000 1140 - for thickness ≥ 60 mm and profilation L, M, F i P	2,0 - 12,0/16,5	9002, 9010	9002, 9010
60	11,0	10,2			9002, 9006, 9010, 9007 - for the module 1140	9002, 9010
80	11,8	11,0				
100	12,6	11,8				
120	13,4	12,6				

* available colors depending on the thickness of the cladding, panels thicknesses and modular widths (details from the Sales Representative)

** typical lining thicknesses; also available 0.6 and 0.7 mm (details from our Sales Representative)

Thermal performance of panels depends on the thickness of the core and is expressed as a coefficient of heat transfer through a space dividing element (shown in the table below). Acoustic parameters were determined on the basis of **EN ISO 10140-3** and **EN-ISO 354**. Coldstore plates can be used as partitions of the requirements of sound insulation no greater than those specified below. Resistance to chemical corrosion - sandwich panels can be used in environments with atmosphere corrosiveness category C1, C2, C3 according to **EN ISO 12944-2**.

▷ TECHNICAL PARAMETERS OF PIR CORE

Thickness [mm]	Heat-transfer coefficient U [W/m²·K]	Acoustic insulation	Reaction to fire	Fire resistance	NRO
	EN 14509	EN ISO 717-1	EN 13501-1	EN 13501-2	PN-B-02867
40	0,60*/ -	R _w = 23 dB R _{a1} = 21 dB R _{a2} = 20 dB	B-s1, d0	-	„NRO“
60	0,38*/ -				
80	0,28*/ 0,24**			EI 20	
100	0,22*/ 0,19**				
120	0,19*/0,16**			EI 30	

* U-factor for panels with conventional cores with coefficient $\lambda = 0,022 \text{ W/m}\cdot\text{K}$

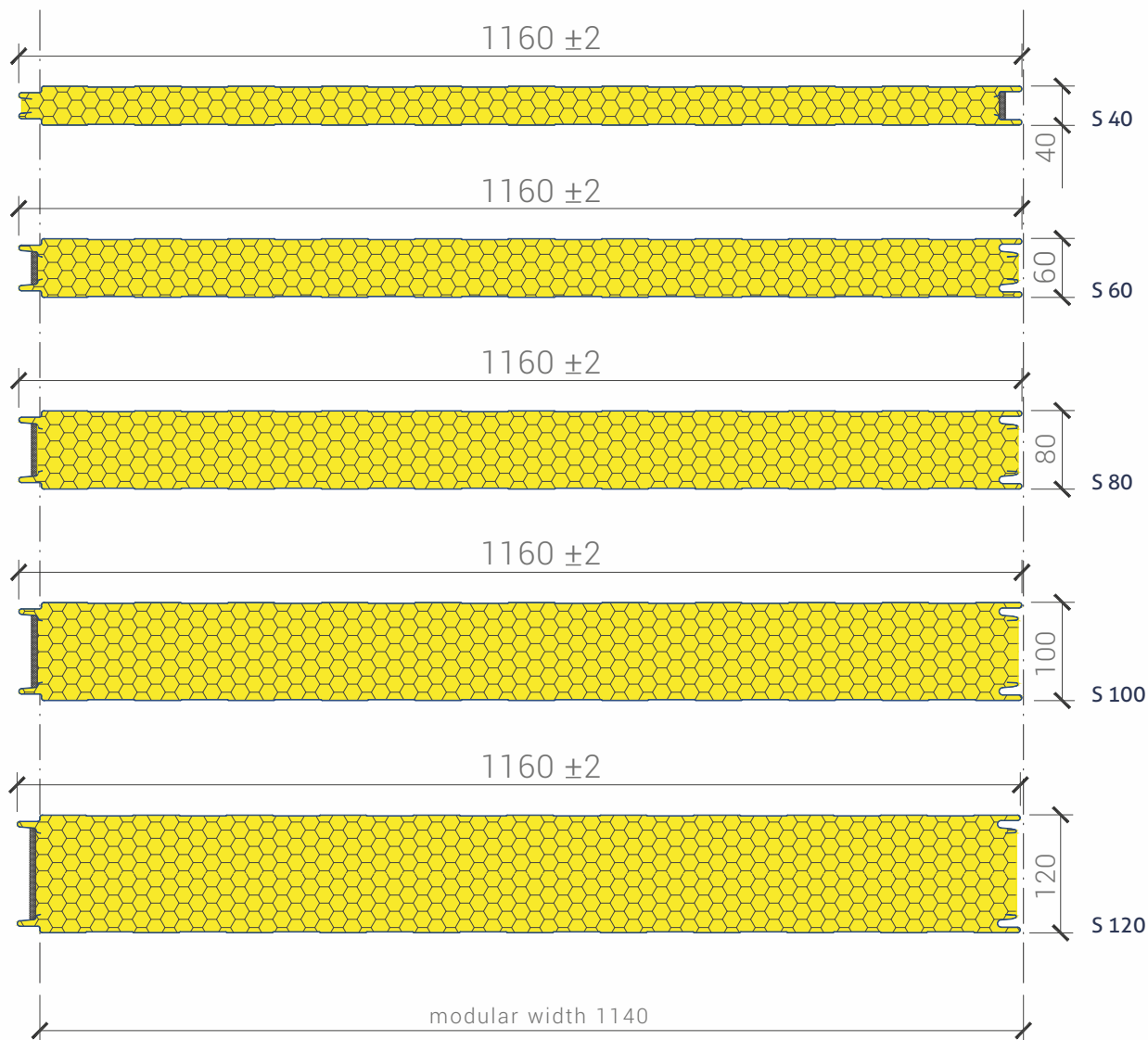
** U-factor for panels with conventional PIR MAX cores with coefficient $\lambda = 0,019 \text{ W/m}\cdot\text{K}$

GS insPIRe® S wall sandwich panel (Standard cam-lock)

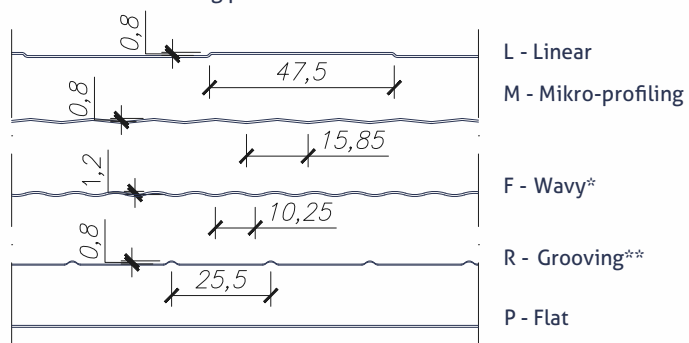
- GS insPIRe® S panel manufacturing program:
 - panel thicknesses
 - profiles of outer and inner facing



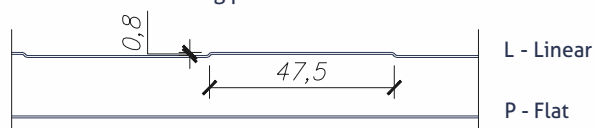
PANEL THICKNESS



External lining profiles



Internal lining profiles



* - Profiling used for new orders as of February 2020. In the case when ordering panels for existing casings, please state this fact when placing the order and provide the previous order number as a reference.

** - for module 1140 performed after prior arrangement (details from Sales Representative)

▷ TABLE OF ALLOWED LOADS FOR GS insPIRe® S SANDWICH PANEL

Table of allowed loads for **GS insPIRe® S** sandwich panel with **0.5 mm** facing in bright colours, mounted as a **single-span** element, in direction to and from support.

Panel thickness	The load due to:	The maximum load [kN/m ²] on the span length [m]:										
		1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5
40	SGN (q _d)	6,00	3,38	2,16	1,50	1,10	0,85	0,66	0,54	0,45	0,38	0,32
	SGU (q _k)	3,63	1,92	1,06	0,60	0,35	0,20	0,11	-	-	-	-
60	SGN (q _d)	7,82	5,09	3,26	2,26	1,66	1,27	1,01	0,82	0,67	0,57	0,8
	SGU (q _k)	5,90	3,53	2,22	1,43	0,95	0,64	0,43	0,30	0,21	0,14	0,10
80	SGN (q _d)	8,90	6,67	4,34	3,02	2,22	1,70	1,34	1,09	0,90	0,75	0,64
	SGU (q _k)	8,63	5,45	3,60	2,45	1,71	1,21	0,88	0,64	0,47	0,35	0,26
100	SGN (q _d)	10,18	7,64	5,44	3,78	2,78	2,13	1,68	1,36	1,12	0,94	0,81
	SGU (q _k)	11,92	7,74	5,26	3,69	2,84	1,93	1,43	1,08	0,82	0,63	0,49
120	SGN (q _d)	10,36	7,77	6,22	4,53	3,33	2,55	2,02	1,63	1,34	1,14	0,97
	SGU (q _k)	14,85	9,85	6,86	4,93	3,61	2,70	2,04	1,56	1,21	0,95	0,75

Table of allowed loads for **GS insPIRe® S** sandwich panel with **0.5 mm** facing in bright colours, mounted as a **multi-span** element, in direction to and from support.

Panel thickness	The load due to:	The maximum load [kN/m ²] on the span length [m]:										
		1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5
40	SGN (q _d)	3,66	1,86	1,11	0,74	0,53	0,39	0,31	0,24	0,20	0,17	0,14
	SGU (q _k)	4,78	2,99	1,95	1,32	0,92	0,65	0,46	0,35	0,25	0,19	0,15
60	SGN (q _d)	3,94	2,99	1,84	1,20	0,84	0,62	0,48	0,38	0,31	0,26	0,22
	SGU (q _k)	6,74	4,54	3,20	2,32	1,71	1,28	0,98	0,75	0,59	0,46	0,37
80	SGN (q _d)	3,33	2,52	2,04	1,68	1,18	0,87	0,66	0,52	0,43	0,35	0,30
	SGU (q _k)	9,39	6,45	4,71	3,51	2,66	2,06	1,62	1,28	1,03	0,83	0,67
100	SGN (q _d)	3,04	2,30	1,85	1,56	1,35	1,11	0,85	0,67	0,54	0,45	0,38
	SGU (q _k)	12,69	8,79	6,49	4,94	3,82	2,99	2,38	1,91	1,55	1,27	1,05
120	SGN (q _d)	3,11	2,34	1,89	1,59	1,37	1,20	1,05	0,82	0,66	0,55	0,46
	SGU (q _k)	15,55	10,86	8,09	6,26	4,91	3,91	3,15	2,56	2,10	1,75	1,45

Load tables are prepared according to **PN-EN 14 509** for panels with PIR core, linings in bright colors and for internal temperature **T = 20°C**. Deflection condition was adopted to **L/100**. In the case of different sheet thickness, temperature, mounting or dark colors lining it is necessary to perform separate calculations. Minimum width of the support - **40 mm** and **60 mm** (indirect). Number of connectors - **4** on the intermediate support, **3** on the extreme support. A detailed list of loads is available on the website : www.gor-stal.pl

▷ PACKING

GS insPIRe® S sandwich panels are packed in packages on pallets to allow their transport. The number of panels in each package depends on their thickness. Details in the table below.

Panel thickness [mm]	40	60	80	100	120
Maximum number of panels in one batch	25	19	14	11	9

Selected details of cladding made of GS insPIRe® S sandwich panels

Details of cam-lock and panel joints for 40 mm thick	011
Details of cam-lock and panel joints for 60, 80, 100, 120 mm thick	011
Details of 40 mm thick panel connection	012
Details of 60, 80, 100, 120 mm thick panel connection	013

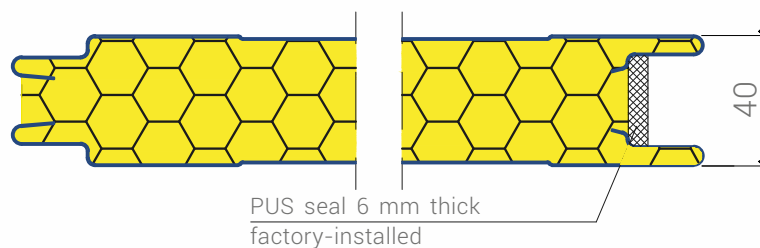
VERTICAL ARRANGEMENT of panels

Details of panel connection to ground beam - Type I	014
Details of panel connection to ground beam - Type II	015
Detail of panel connection to flooring	016
Detail of panel connection in a corner - Type I	017
Detail of panel connection in a corner - Type II	018
Detail of panel connection in an optional angle corner	019
Detail of panel connection to blockwall	020
Detail of building expansion joint	021
Detail of steel post in a roller shutter door	022
Detail of roller shutter door lintel	023
Detail of window mounting in a sandwich panel - Type I – vertical section	024
Detail of window mounting in a sandwich panel - Type I – horizontal section	025
Detail of window mounting in a sandwich panel - Type II – vertical section	026
Detail of window mounting in a sandwich panel - Type II – horizontal section	027

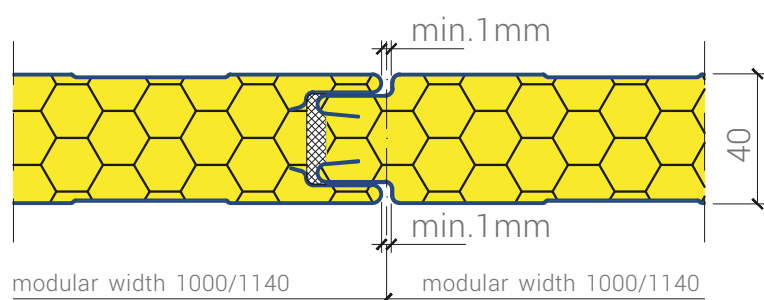
HORIZONTAL ARRANGEMENT of panels

Details of panel connection to ground beam - Type I	028
Details of panel connection to ground beam - Type II	029
Detail of panel connection to flooring	030
Detail of panel connection in a corner	031
Detail of panel connection in an optional angle corner	032
Detail of panel connection to blockwall	033
Detail of panel connection to main support	034
Detail of panel connection to intermediate support	035
Detail of building expansion joint	036
Detail of panel connection to reinforced concrete support	037
Detail of post to roller shutter door	038
Detail of roller shutter door lintel	039
Detail of window mounting in a sandwich panel - Type I – vertical section	040
Detail of window mounting in a sandwich panel - Type I – horizontal section	041
Detail of window mounting in a sandwich panel - Type II – vertical section	042
Detail of window mounting in a sandwich panel - Type II – horizontal section	043

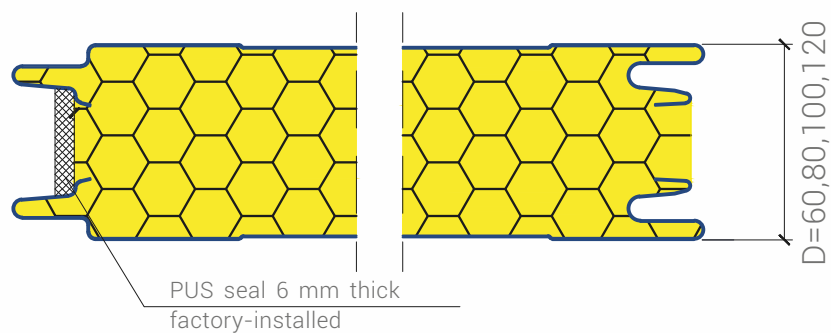
Shape of cam-lock for 40 mm thick panels



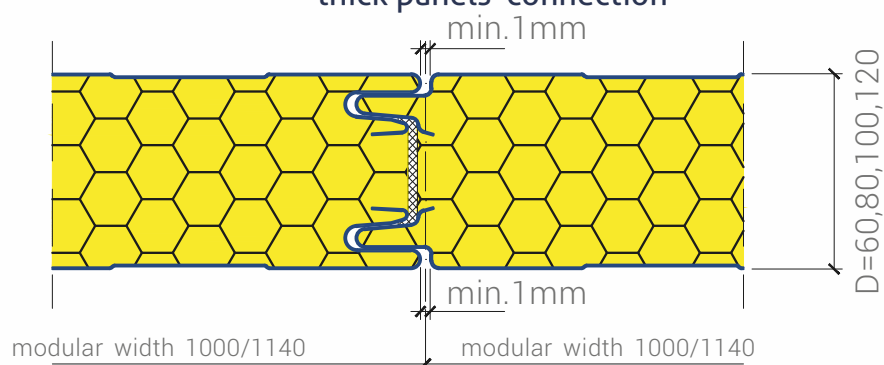
Detail of 40 mm thick panels connection



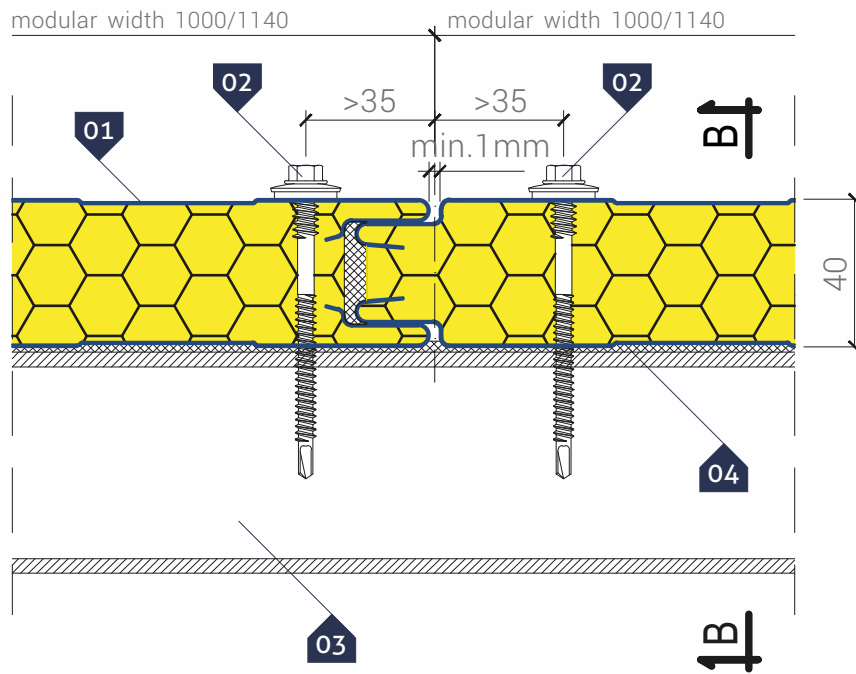
Shape of cam-lock for 60, 80, 100 and 120 mm thick panels



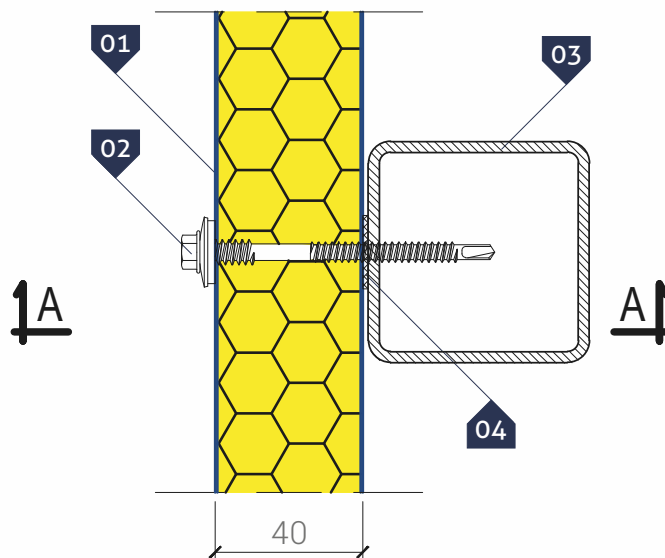
Detail of 60, 80, 100 and 120 mm thick panels' connection



A-A cross-section



B-B cross-section



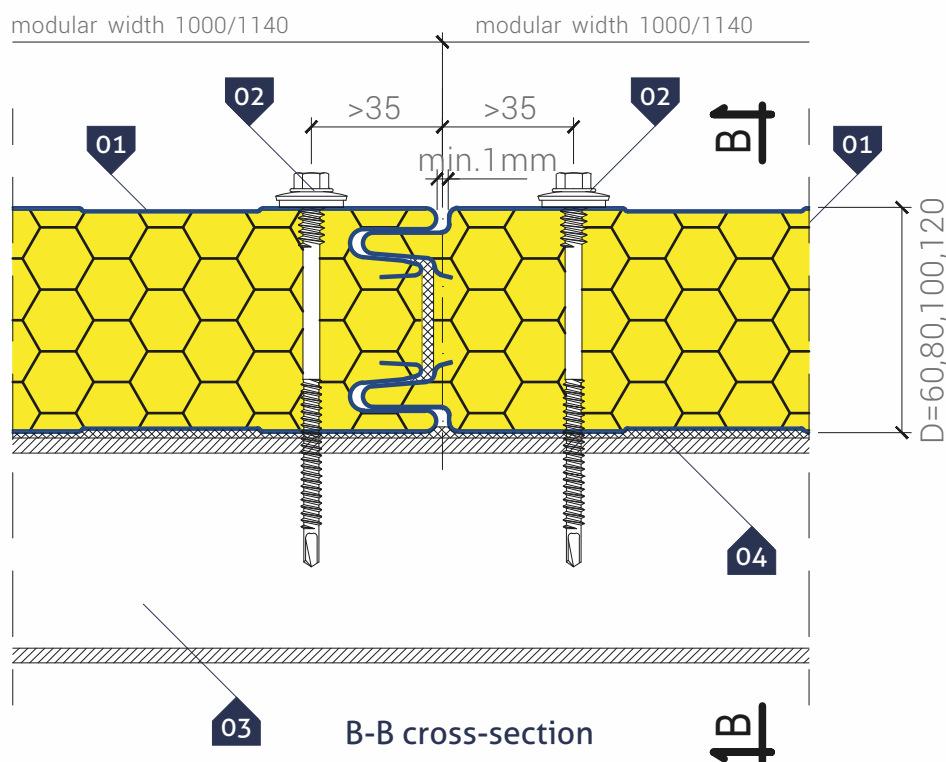
KEY:

- 01. GS insPIRe® S wall panel
- 02. Self-drilling connector for sandwich panels
- 03. Transom acc. to structure design
- 04. Polyethylene, self-adhesive sealing tape (PES)*

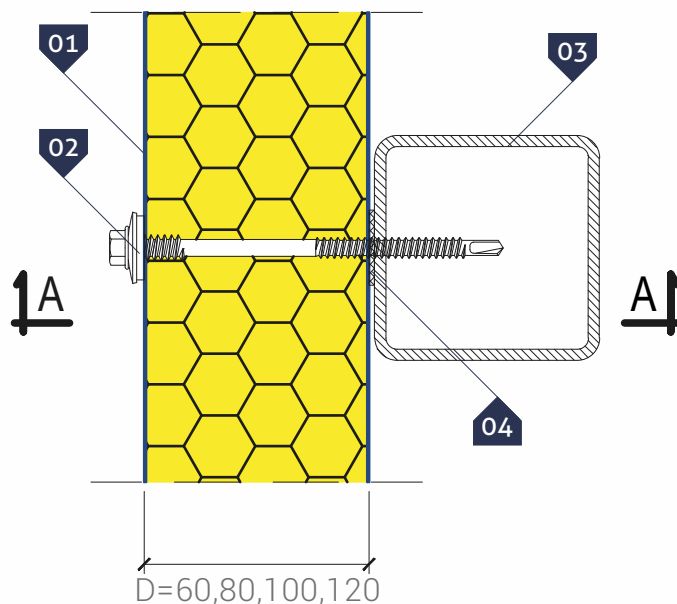
- NOTE: fasten each panel along its width to a structure with a minimum of three connectors (this applies to full-width panels).

* - a recommended item

A-A cross-section



B-B cross-section



KEY:

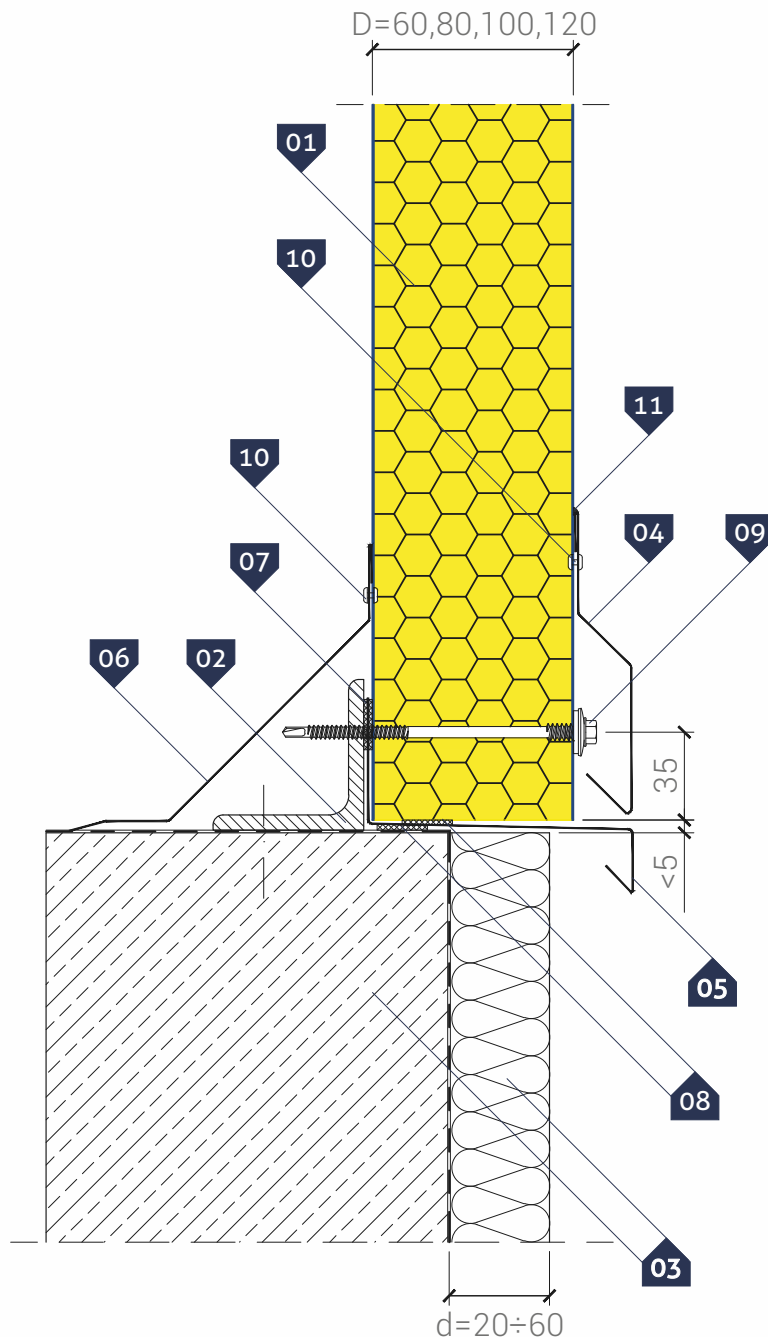
- 01. GS insPIRe® S wall panel
- 02. Self-drilling connector for sandwich panels
- 03. Transom acc. to structure design
- 04. Polyethylene, self-adhesive sealing tape (PES)*

- NOTE: fasten each panel along its length to a structure with a minimum of three cam-locks (this applies to full-width panels).

* - a recommended item

GS insPIRe® S wall sandwich panel (Standard cam-lock)

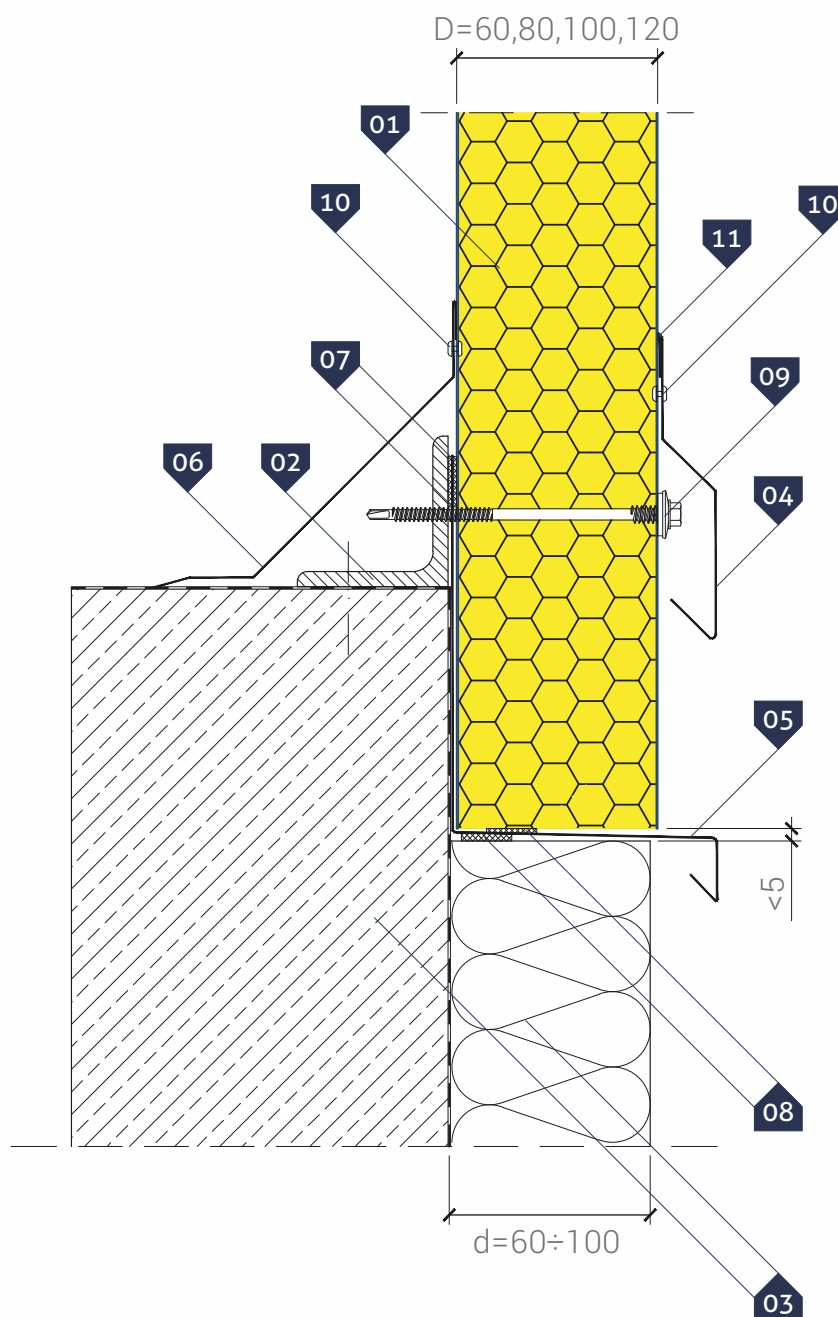
- ▷ VERTICAL ARRANGEMENT of panels
Details of panel connection to ground beam
Type I



▷ **KEY:**

- 01. GS insPIRe® S wall panel
- 02. Steel section acc. to structure design
- 03. Ground beam with insulation and thermal insulation acc. to detailed design
- 04. Drip edge **OB-10** (option)
- 05. Eaves **OB-13**
- 06. Covering flashing **OB-08**
- 07. Polyethylene, self-adhesive sealing tape (**PES**)*
- 08. Impregnated polyurethane gasket (**PURS**) or polyurethane fitting mounting foam
- 09. Self-drilling connector for sandwich panels
- 10. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**
- 11. Neutral silicone sealant

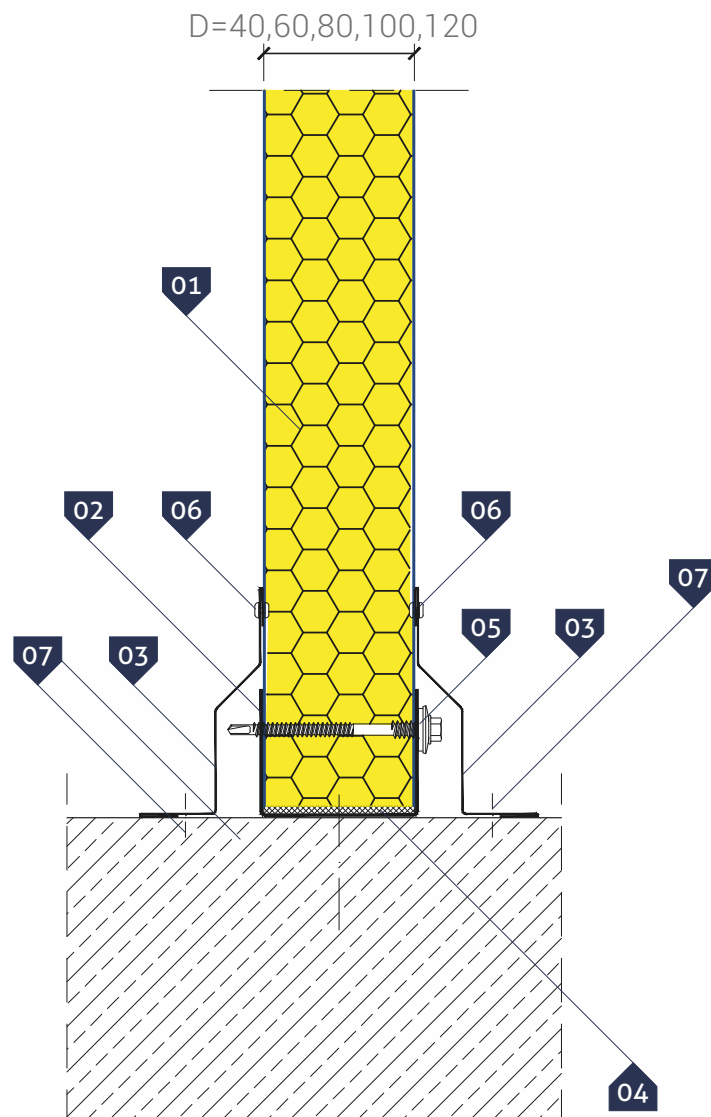
* - a recommended item



▷ **KEY:**

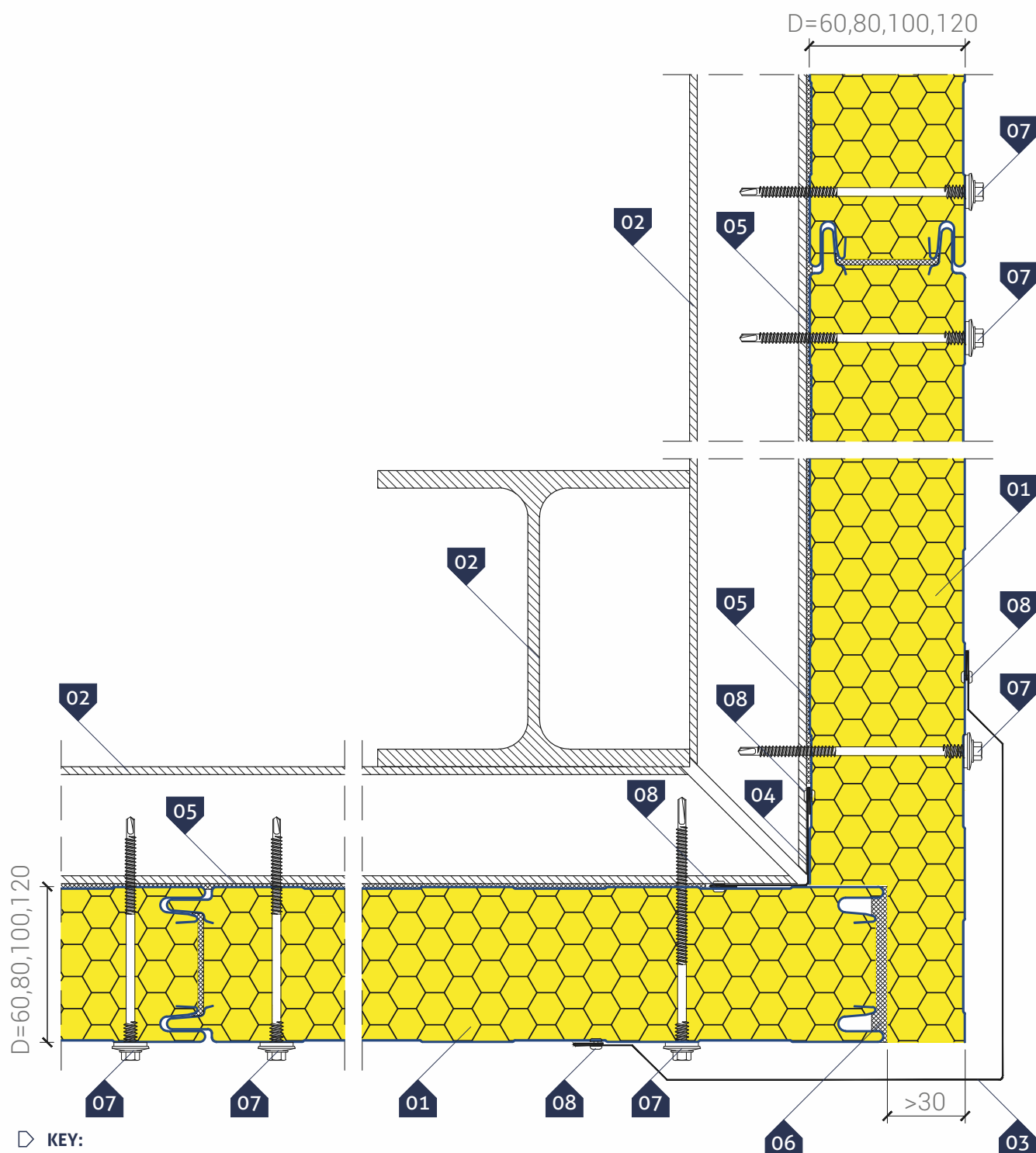
- 01. GS insPIRe® S wall panel
- 02. Steel section acc. to structure design
- 03. Ground beam with insulation and thermal insulation acc. to detailed design
- 04. Drip edge **OB-10** (option)
- 05. Eaves **OB-13** (extended)
- 06. Covering flashing **OB-08**
- 07. Polyethylene, self-adhesive sealing tape (**PES**)*
- 08. Impregnated polyurethane gasket (PURS) or polyurethane fitting mounting foam
- 09. Self-drilling connector for sandwich panels
- 10. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**
- 11. Neutral silicone sealant

* - a recommended item



▷ **KEY:**

- 01. **GS insPIRe® S** wall panel
- 02. Edge channel section **OB-42**
- 03. Covering flashing **OB-05**
- 04. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 05. Self-drilling connector for sandwich panels
- 06. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**
- 07. Steel expansion joint for fast assembly



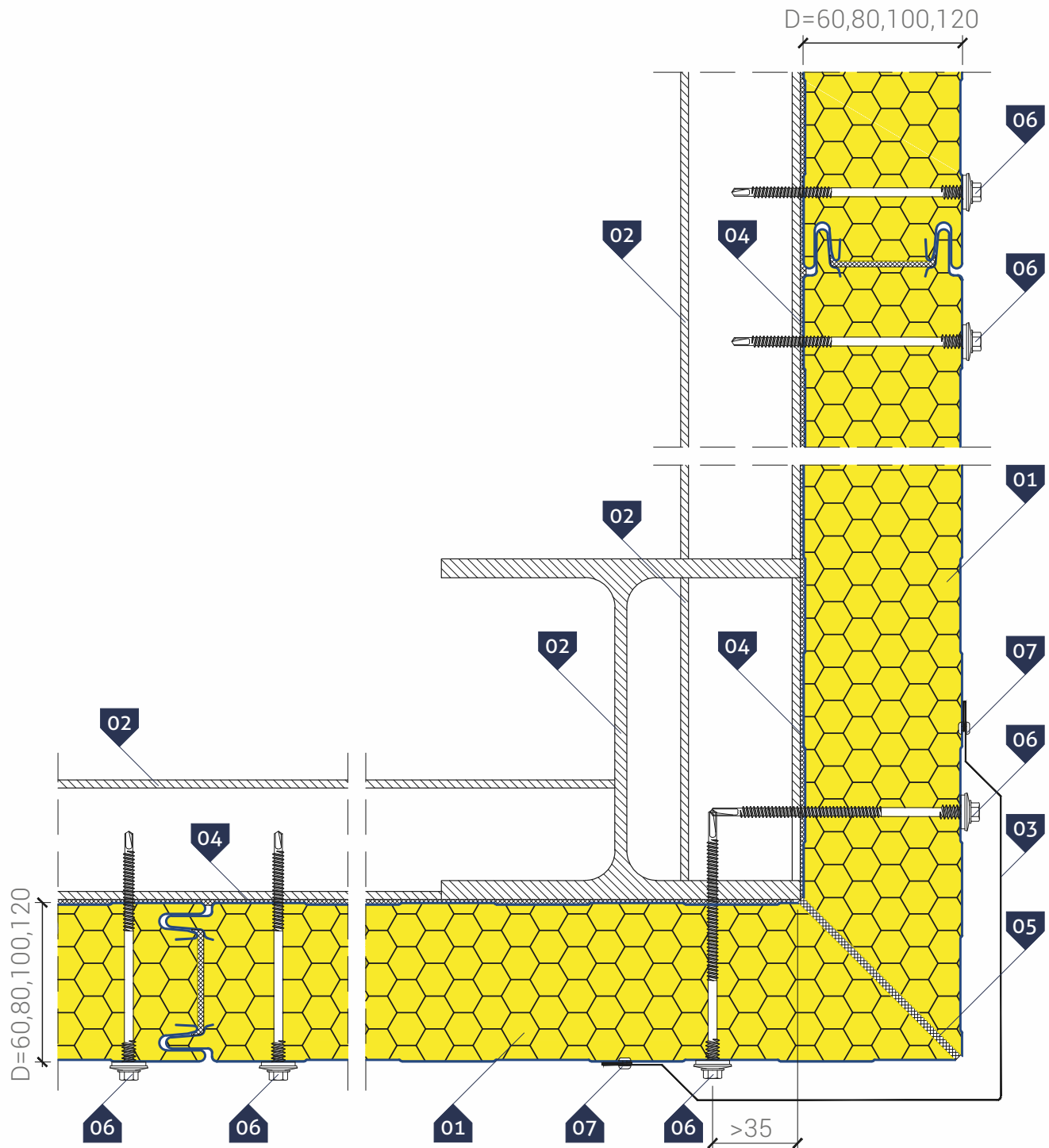
▷ KEY:

- 01. GS insPIRe® S wall panel
- 02. Steel post and transom acc. to structure design
- 03. Corner flashing OB-03
- 04. Corner flashing OB-02
- 05. Polyethylene, self-adhesive sealing tape (PES)*
- 06. Impregnated polyurethane seal (PURS) or polyurethane caulking foam
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets or rivet 4.0 x 8.0

* - a recommended item

GS insPIRe® S wall sandwich panel (Standard cam-lock)

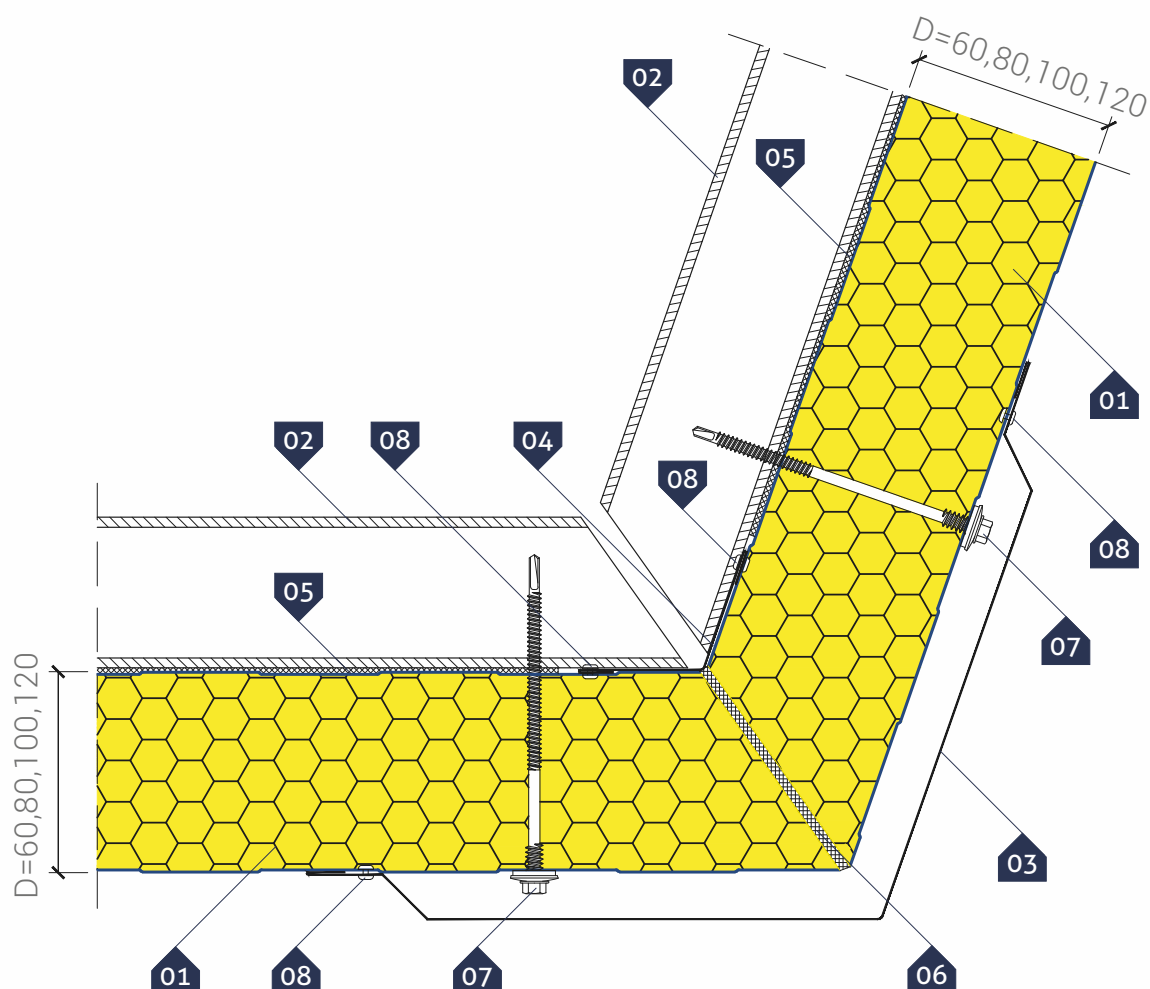
- ▷ VERTICAL ARRANGEMENT of panels
Detail of panel connection in a corner
Type II



▷ Key:

- 01. GS insPIRe® S wall panel
- 02. Steel post and transom acc. to structure design
- 03. Corner flashing **OB-03**
- 04. Polyethylene, self-adhesive sealing tape (**PES**)*
- 05. Polyurethane caulking foam
- 06. Self-drilling connector for sandwich panels
- 07. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

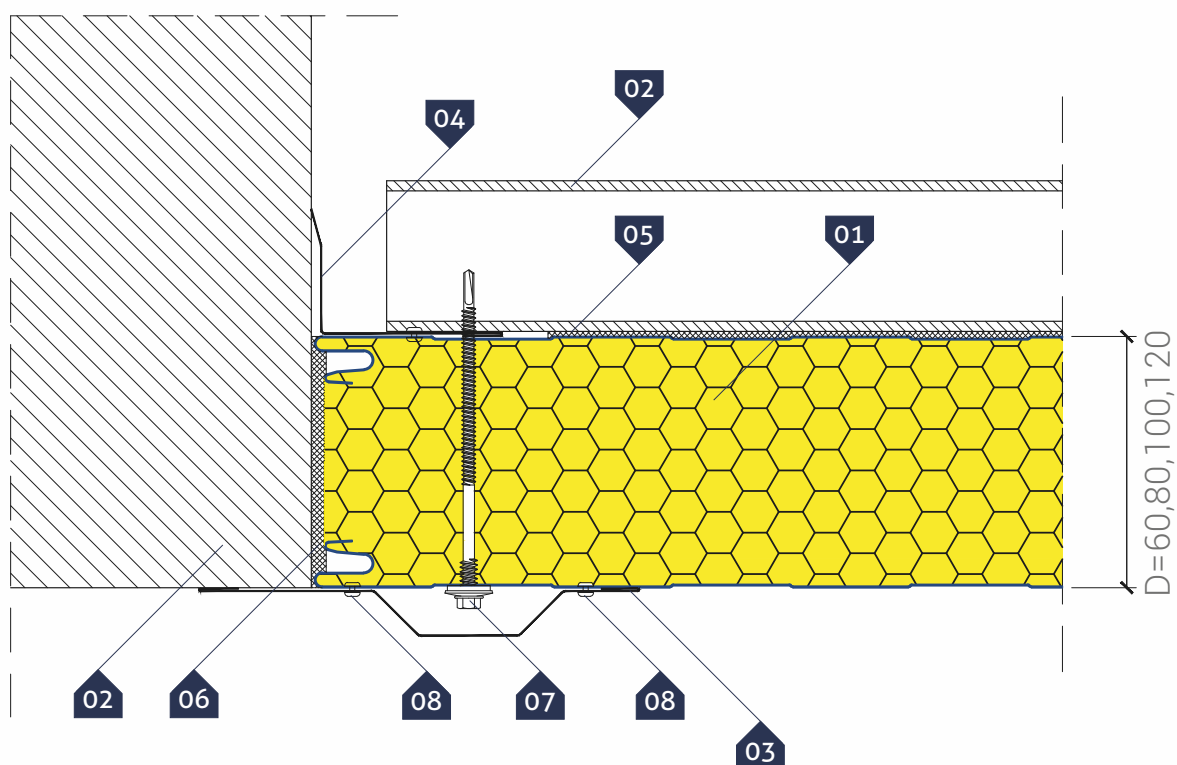
* - a recommended item



▷ **KEY:**

- 01. GS insPIRe® S wall panel
- 02. Transom acc. to structure design
- 03. Corner flashing **OB-03**
- 04. Corner flashing **OB-02**
- 05. Polyethylene, self-adhesive sealing tape (**PES**)*
- 06. Polyurethane caulking foam
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

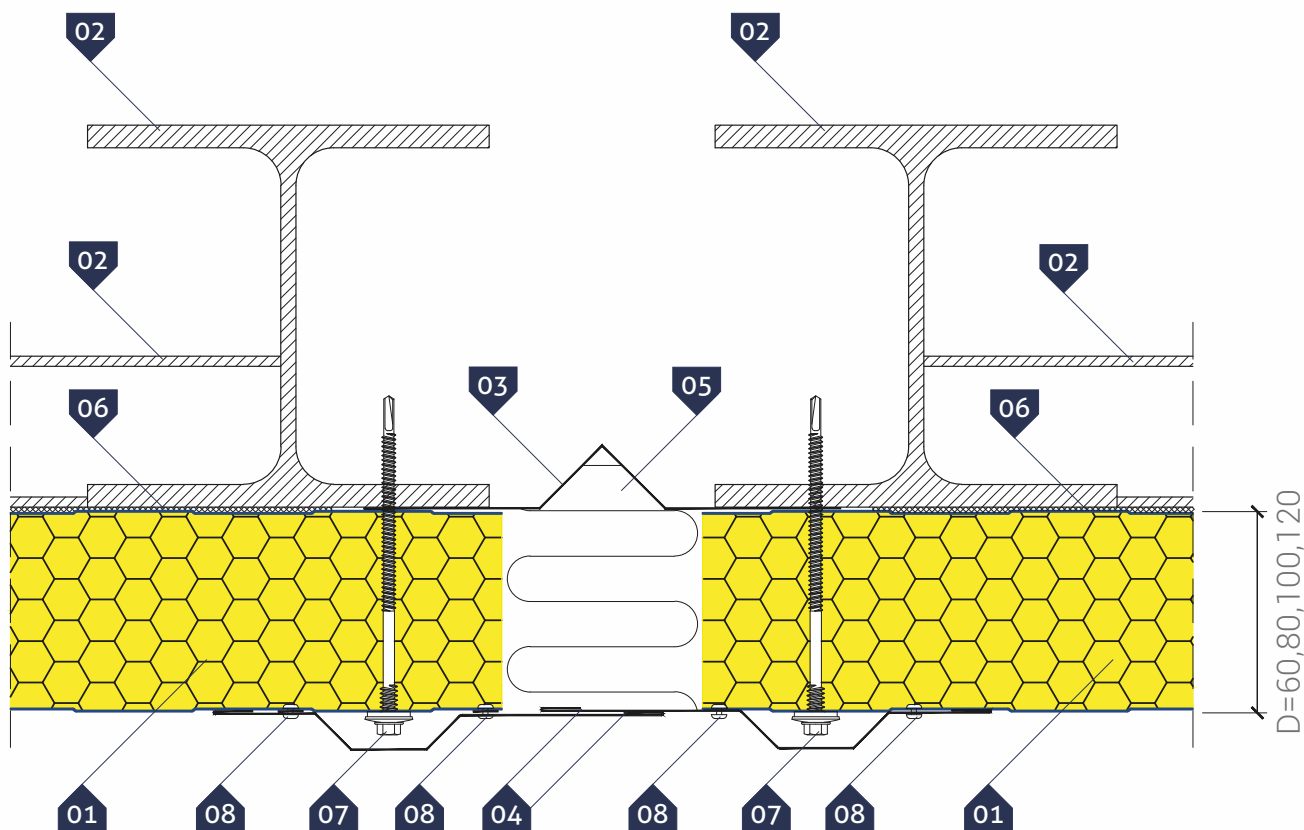
* - a recommended item



▷ **KEY:**

- 01. **GS insPIRe® S** wall panel
- 02. Blockwall and transom acc. to structure design
- 03. Covering flashing **OB-19**
- 04. Inner corner flashing **OB-07**
- 05. Polyethylene, self-adhesive sealing tape (**PES**)*
- 06. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item



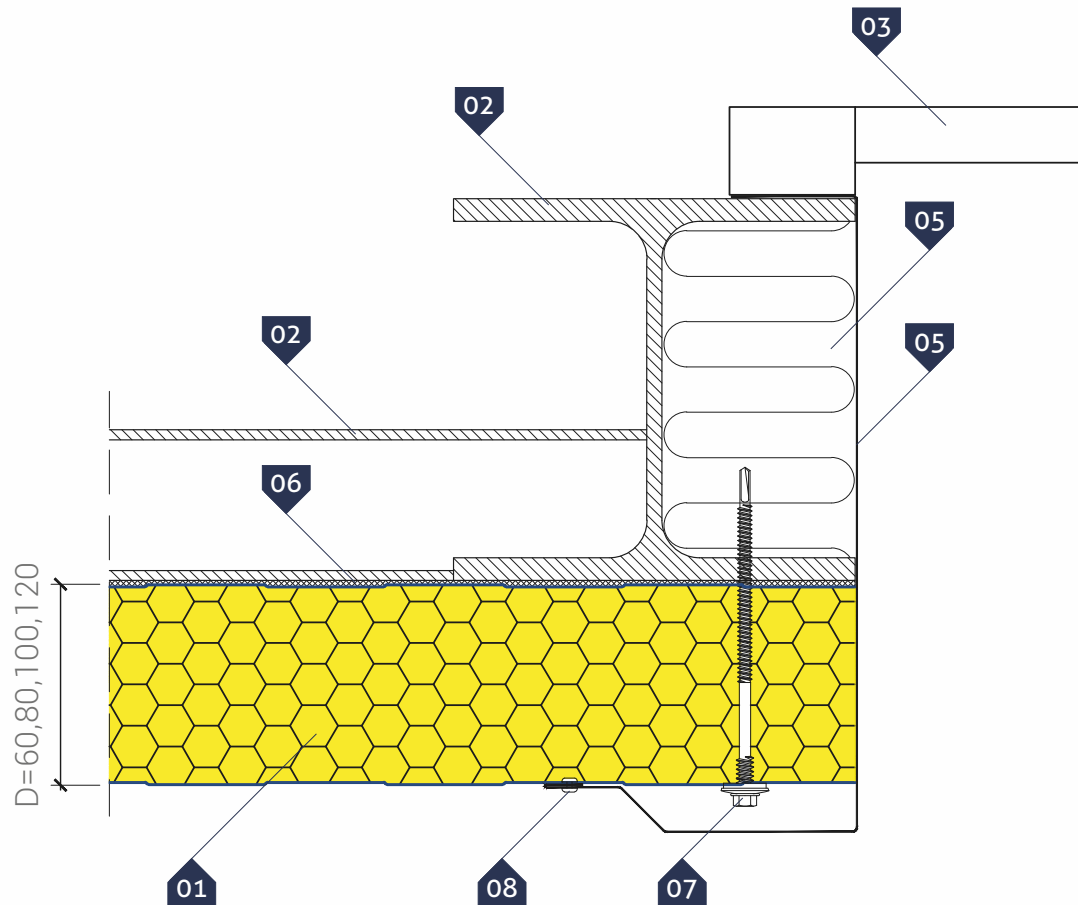
▷ **KEY:**

- 01. GS insPIRe® S wall panel
- 02. Steel post and transom acc. to structure design
- 03. Individual expansion joint flashing
- 04. Covering flashing **OB-17**
- 05. Thermal insulation on the fastening
- 06. Polyethylene, self-adhesive sealing tape (PES)*
- 07. Polyethylene, self-adhesive sealing tape
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item

GS insPIRe® S wall sandwich panel (Standard cam-lock)

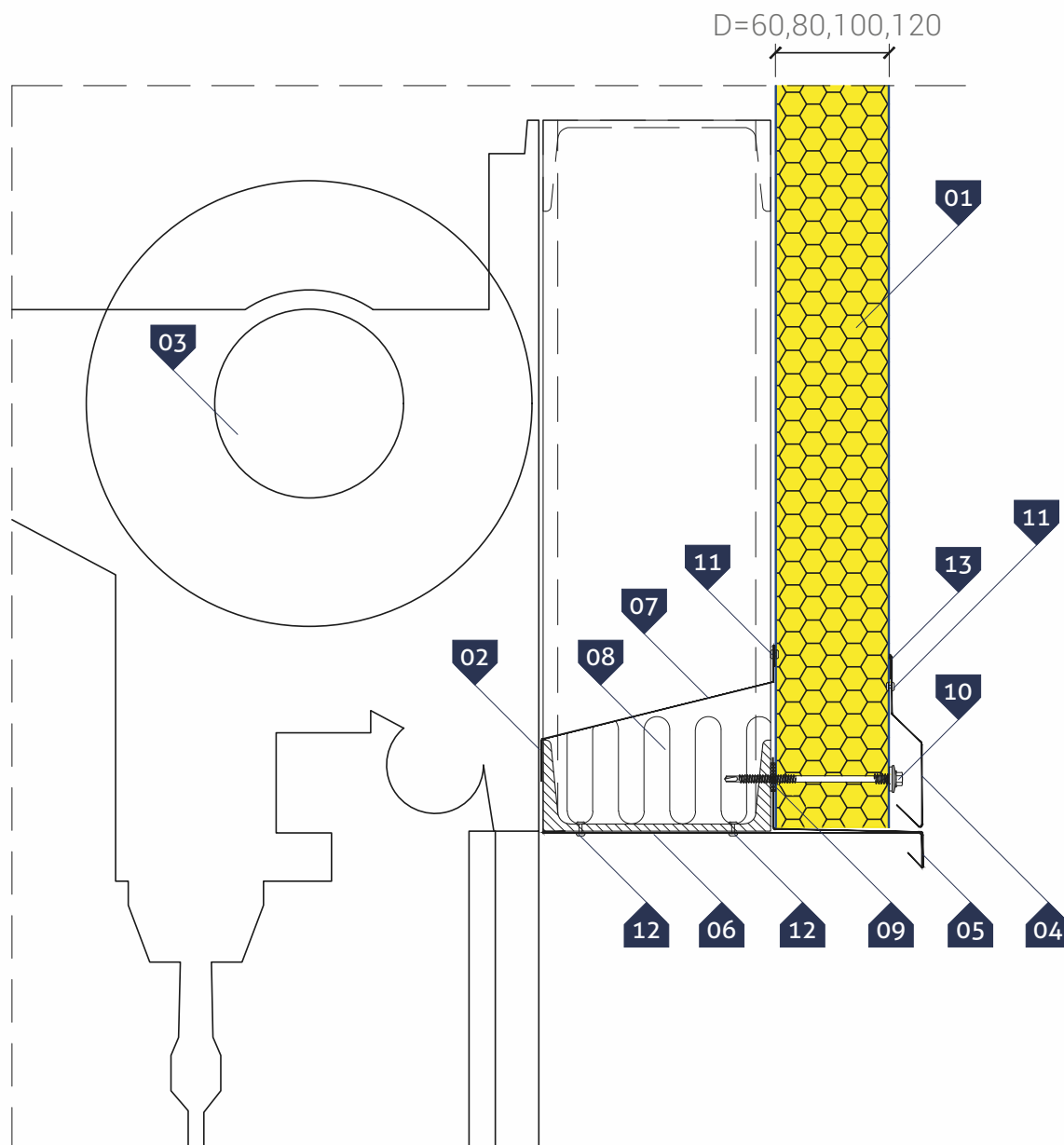
- ▷ VERTICAL ARRANGEMENT of panels
Detail of steel post in a roller shutter door



▷ KEY:

- 01. GS insPIRe® S wall panel
- 02. Steel post and transom acc. to structure design
- 03. Industrial door
- 04. Door flashing **OB-21**
- 05. Thermal insulation on the fastening
- 06. Polyethylene, self-adhesive sealing tape (**PES**)*
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item



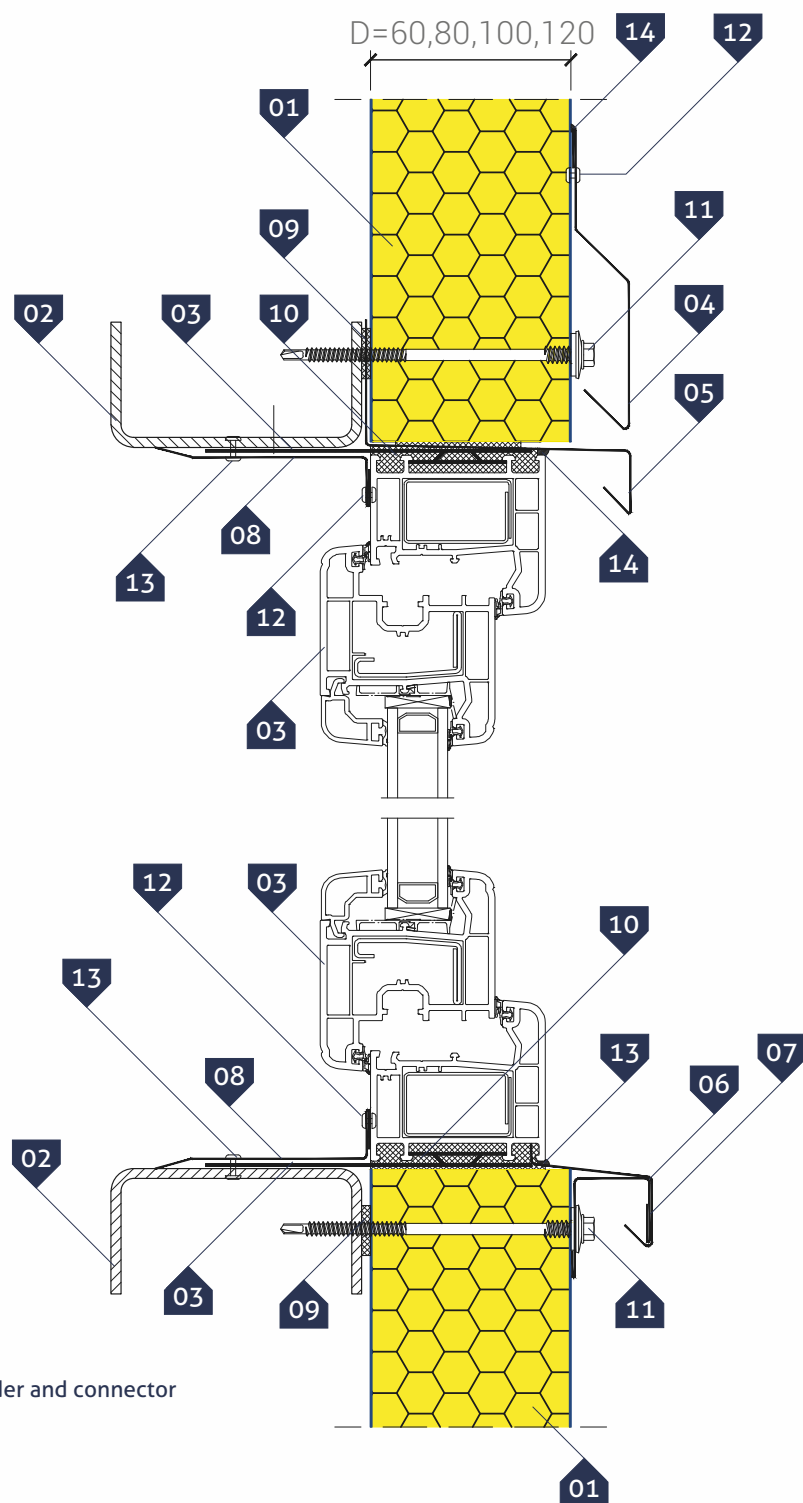
▷ **KEY:**

- 01. GS insPIRe® S wall panel
- 02. Transom acc. to structure design
- 03. Roller shutter door
- 04. Drip edge **OB-10**
- 05. Drip edge **OB-13**
- 06. Covering flashing **OB-20**
- 07. Individual covering flashing
- 08. Thermal insulation on the fastening
- 09. Polyethylene, self-adhesive sealing tape (**PES**)*
- 10. Self-drilling connector for sandwich panels
- 11. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**
- 12. Blind rivet **4,8 x 15,1** (for the structure)
- 13. Neutral silicone sealant

* - a recommended item

GS insPIRe® S wall sandwich panel (Standard cam-lock)

- ▷ VERTICAL ARRANGEMENT of panels
- Detail of window mounting in a sandwich panel
- Type I – vertical section



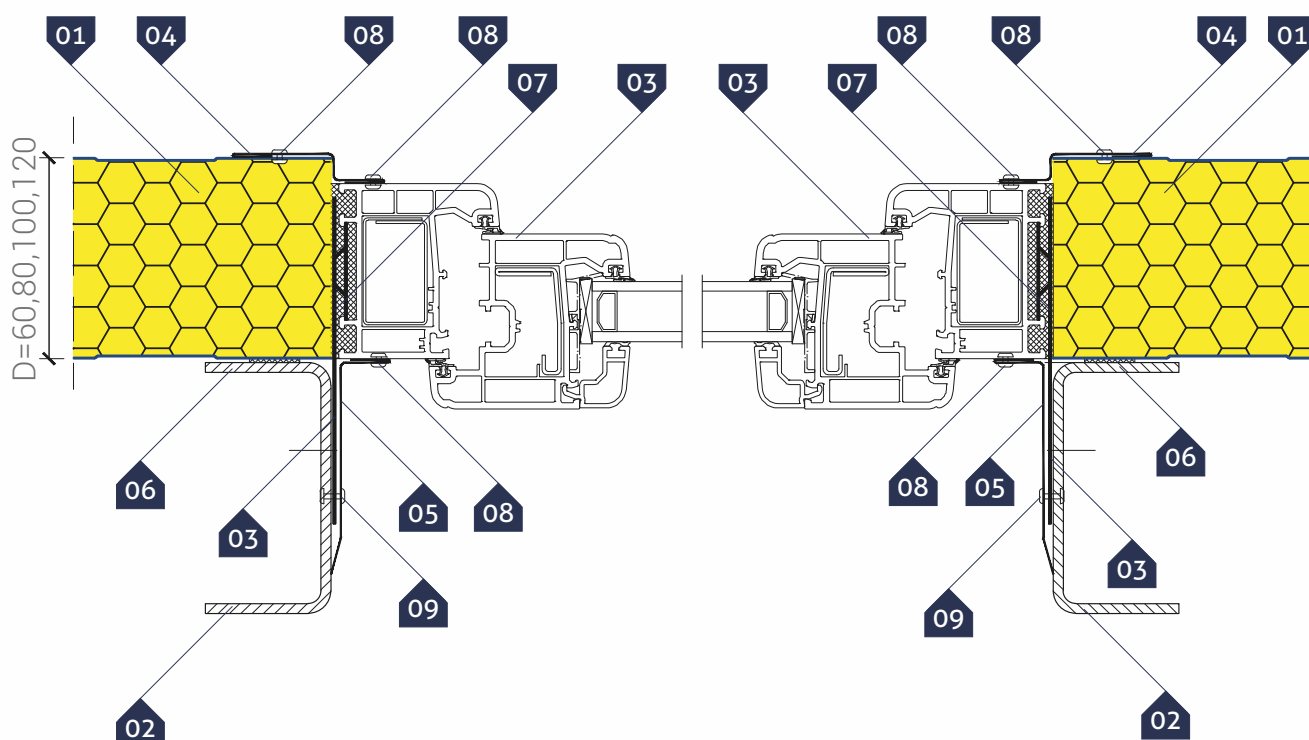
▷ KEY:

- 01. GS insPIRe® S wall panel
- 02. Transom acc. to structure design
- 03. PCV or aluminium window with a holder and connector
- 04. Drip edge OB-10
- 05. Drip edge OB-13
- 06. Cill OB. OB-37
- 07. Rigid flashing OB-16
- 08. Individual internal corner
- 09. Polyethylene, self-adhesive sealing tape (PES)*
- 10. Polyethylene caulking foam
- 11. Self-drilling connector for sandwich panels
- 12. Self-drilling connector for steel sheets or rivet 4.0 x 8.0
- 13. Blind rivet 4,8 x 15,1 (for the structure)
- 14. Neutral silicone sealant

* - a recommended item

GS insPIRe® S wall sandwich panel (Standard cam-lock)

- ▷ VERTICAL ARRANGEMENT of panels
Detail of window mounting in a sandwich panel
Type I – horizontal section



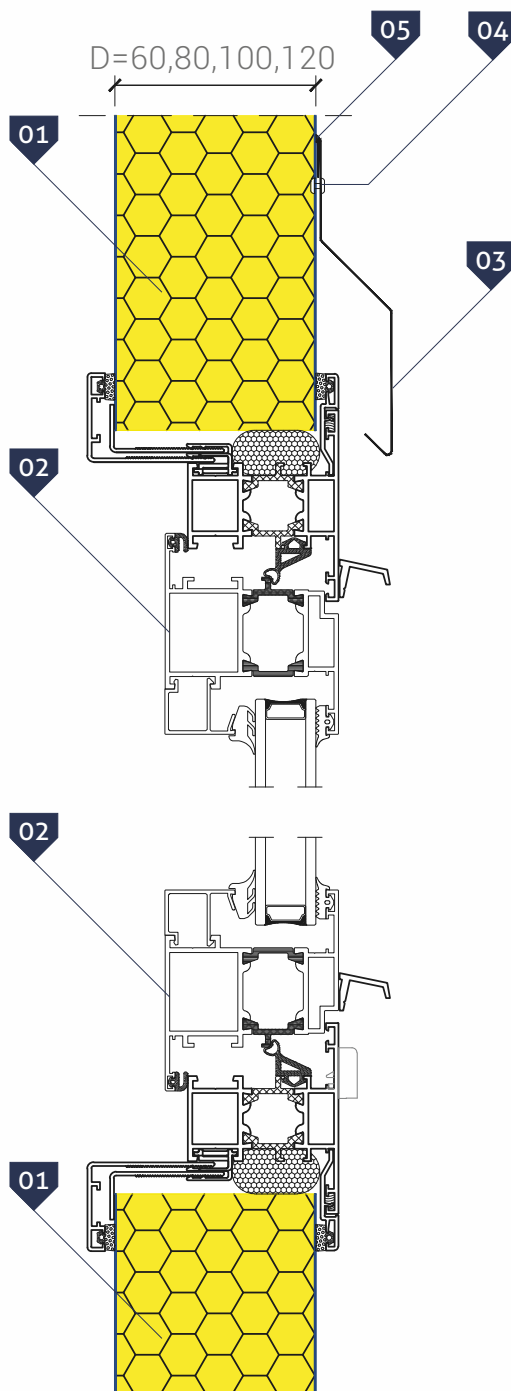
▷ KEY:

- 01. GS insPIRe® S wall panel
- 02. Transom acc. to structure design
- 03. PVC or aluminium window with a holder and connector
- 04. Individual covering flashing
- 05. Individual internal corner
- 06. Polyethylene, self-adhesive sealing tape (PES)*
- 07. Polyethylene caulking foam
- 08. Self-drilling connector for steel sheets or rivet 4.0 x 8.0
- 09. Blind rivet 4,8 x 15,1 (for the structure)

* - a recommended item

GS insPIRe® S wall sandwich panel (Standard cam-lock)

- ▷ VERTICAL ARRANGEMENT of panels
Detail of window mounting in a sandwich panel
Type II – vertical section

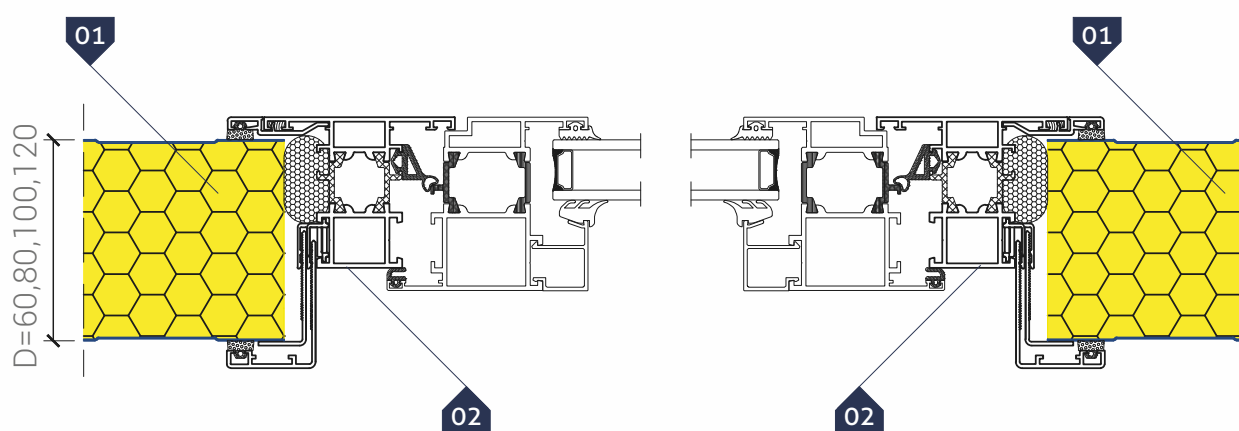


▷ **KEY:**

- 01. GS insPIRe® S wall panel
- 02. PVC or aluminium window with a fastening profile
- 03. Drip edge OB-11 (option)
- 04. Self-drilling connector for steel sheets or rivet 4.0 x 8.0
- 05. Neutral silicone sealant

GS insPIRe® S wall sandwich panel (Standard cam-lock)

- ▷ VERTICAL ARRANGEMENT of panels
- Detail of window mounting in a sandwich panel
Type II – horizontal section



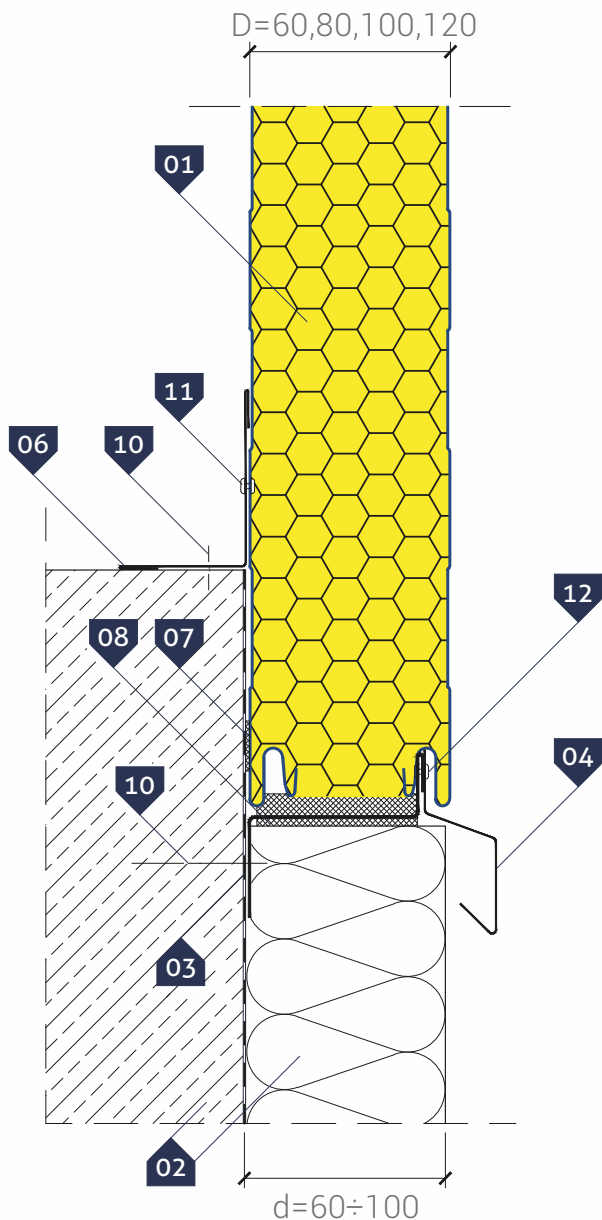
- ▷ **KEY:**
- 01. GS insPIRe® S wall panel
 - 02. PVC or aluminium window with a fastening profile

GS insPIRe® S wall sandwich panel (Standard cam-lock)

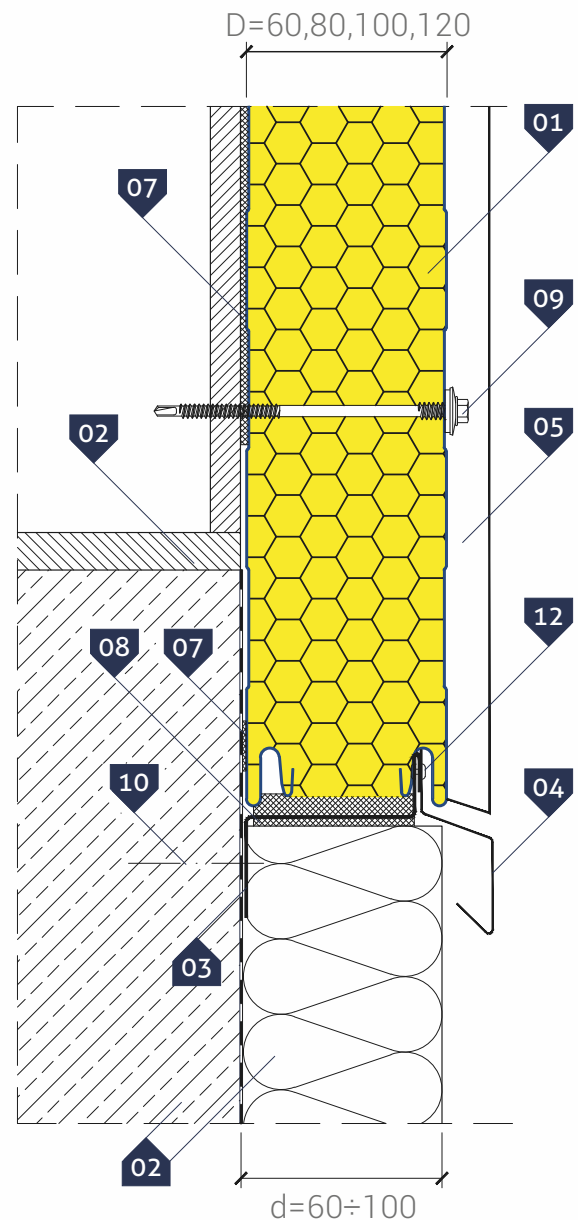
- ▷ HORIZONTAL ARRANGEMENT of panels
- Details of panel connection to ground beam
- Type I



In the span



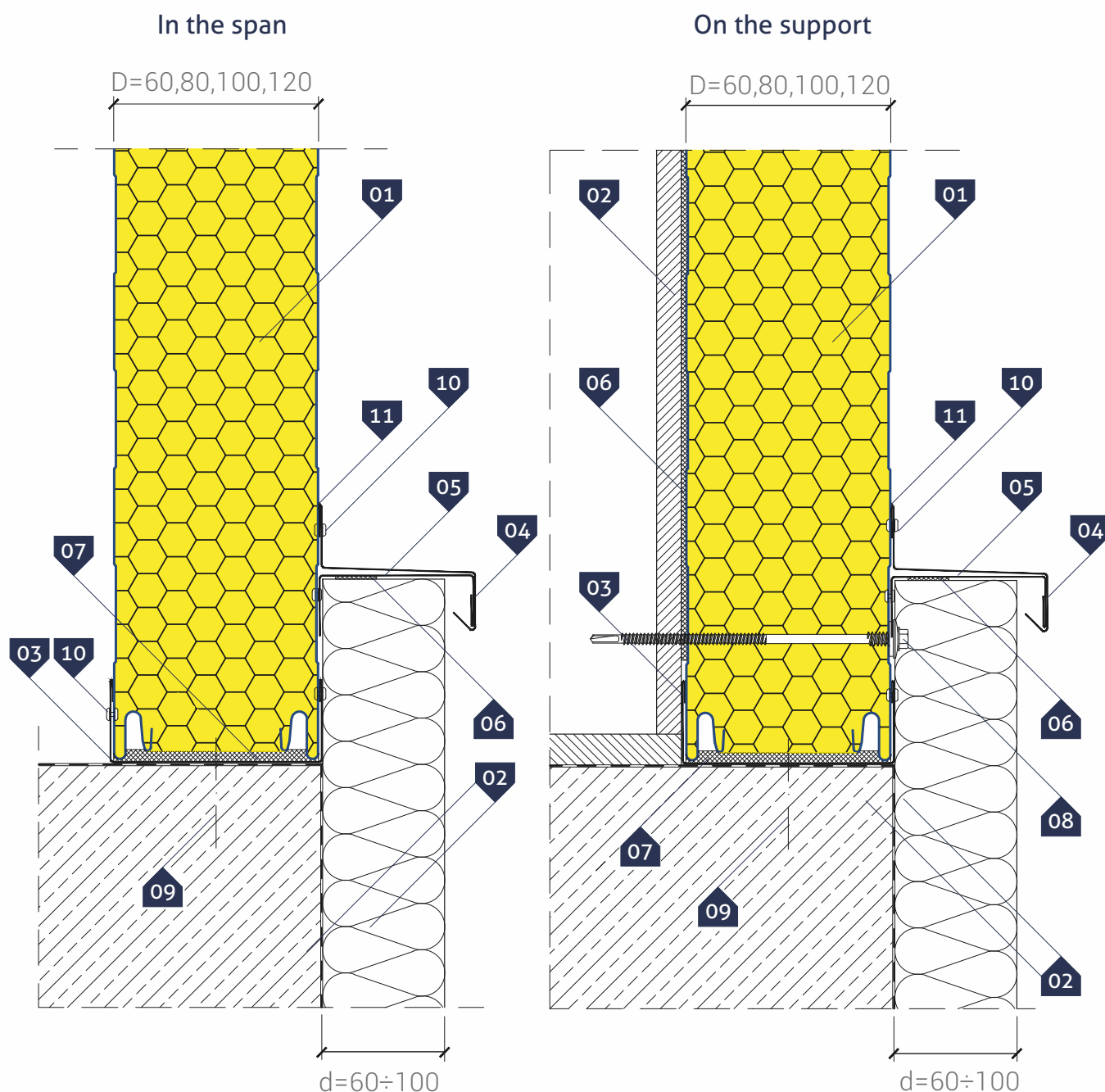
On the support



KEY:

- ▷ 01. GS insPIRe® S wall panel
- 02. Structural elements acc. to detailed design and thermal insulation carried out after assembly of panel
- 03. Edge Z-bar OB-38
- 04. Drip edge OB-14
- 05. Covering flashing for panel junction
- 06. Corner flashing OB-06
- 07. Polyethylene, self-adhesive sealing tape (PES)*
- 08. Impregnated polyurethane seal (PURS) or polyurethane caulking foam
- 09. Self-drilling connector for sandwich panels
- 10. Steel expansion joint for quick assembly
- 11. Self-drilling connector for steel sheets or rivet 4.0 x 8.0
- 12. Rivet 4.0 x 8.0

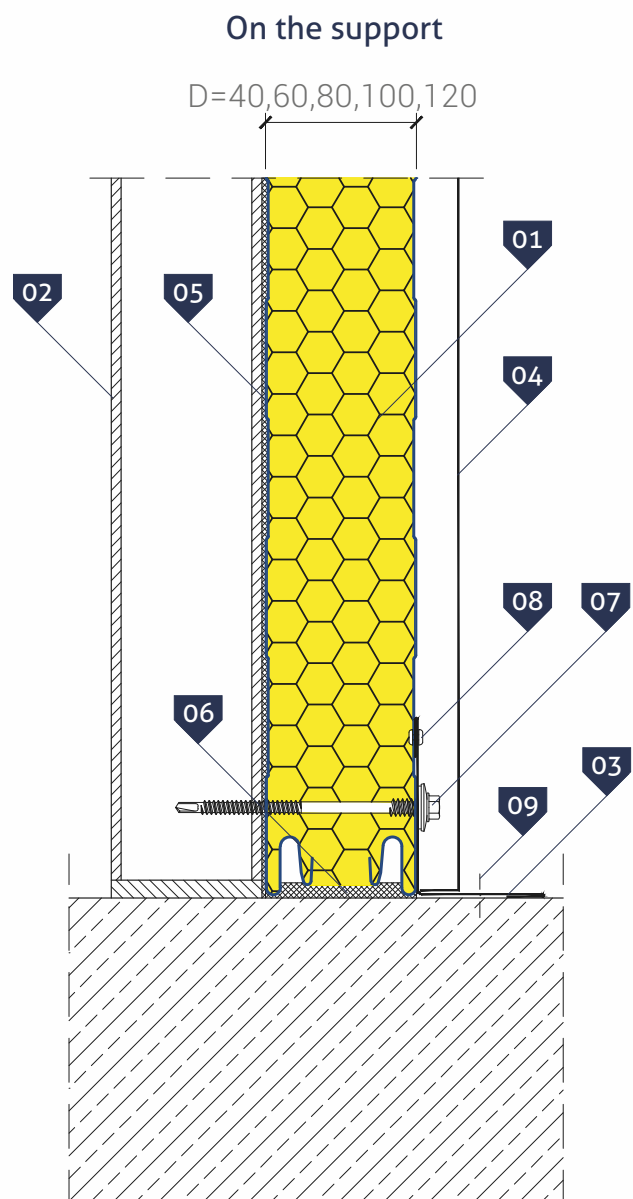
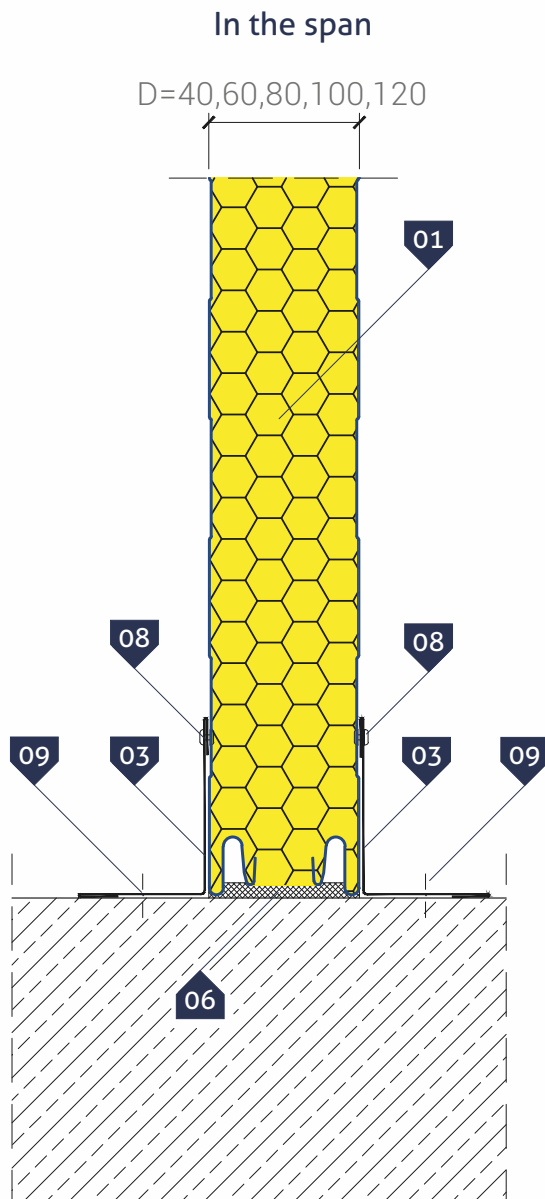
* - a recommended item



▷ **KEY:**

- 01. GS insPIRe® S wall panel
- 02. Structural elements acc. to detailed design and thermal insulation carried out after assembly of panel
- 03. Flashing **OB-42**
- 04. Drip edge **OB-15**
- 05. Rigid flashing **OB-15a**
- 06. Polyethylene, self-adhesive sealing tape (**PES**)*
- 07. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 08. Self-drilling connector for sandwich panels
- 09. Steel expansion joint for quick assembly
- 10. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**
- 11. Neutral silicone sealant

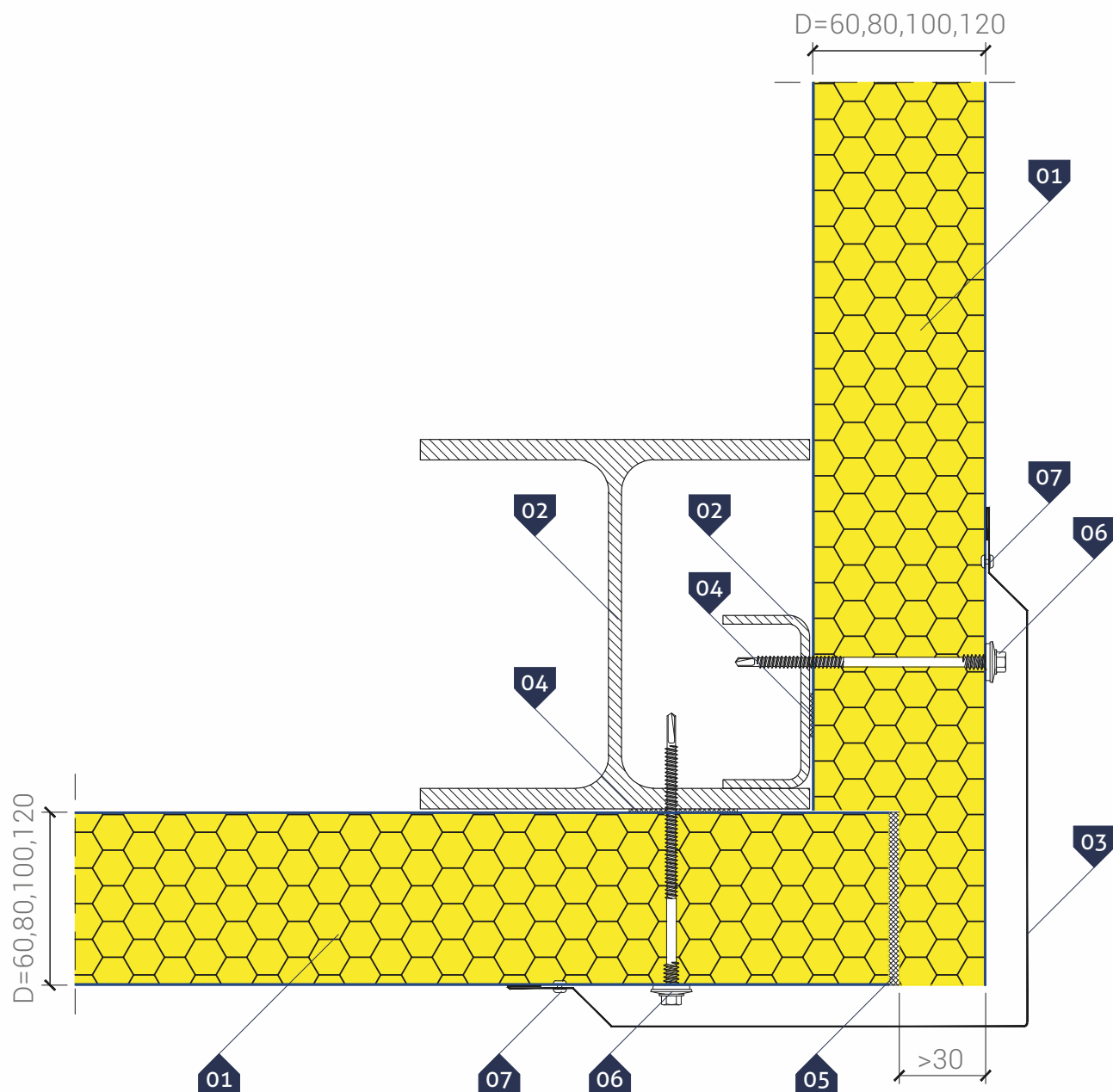
* - a recommended item



▷ KEY:

- 01. GS insPIRe® S wall panel
- 02. Steel post acc. to structure design
- 03. Corner flashing **OB-06**
- 04. Covering flashing for panel joints
- 05. Polyethylene, self-adhesive sealing tape (**PES**)*
- 06. Impregnated polyurethane seal (**PURS**) lub or polyurethane caulking foam
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**
- 09. Steel expansion joint for quick assembly

* - a recommended item



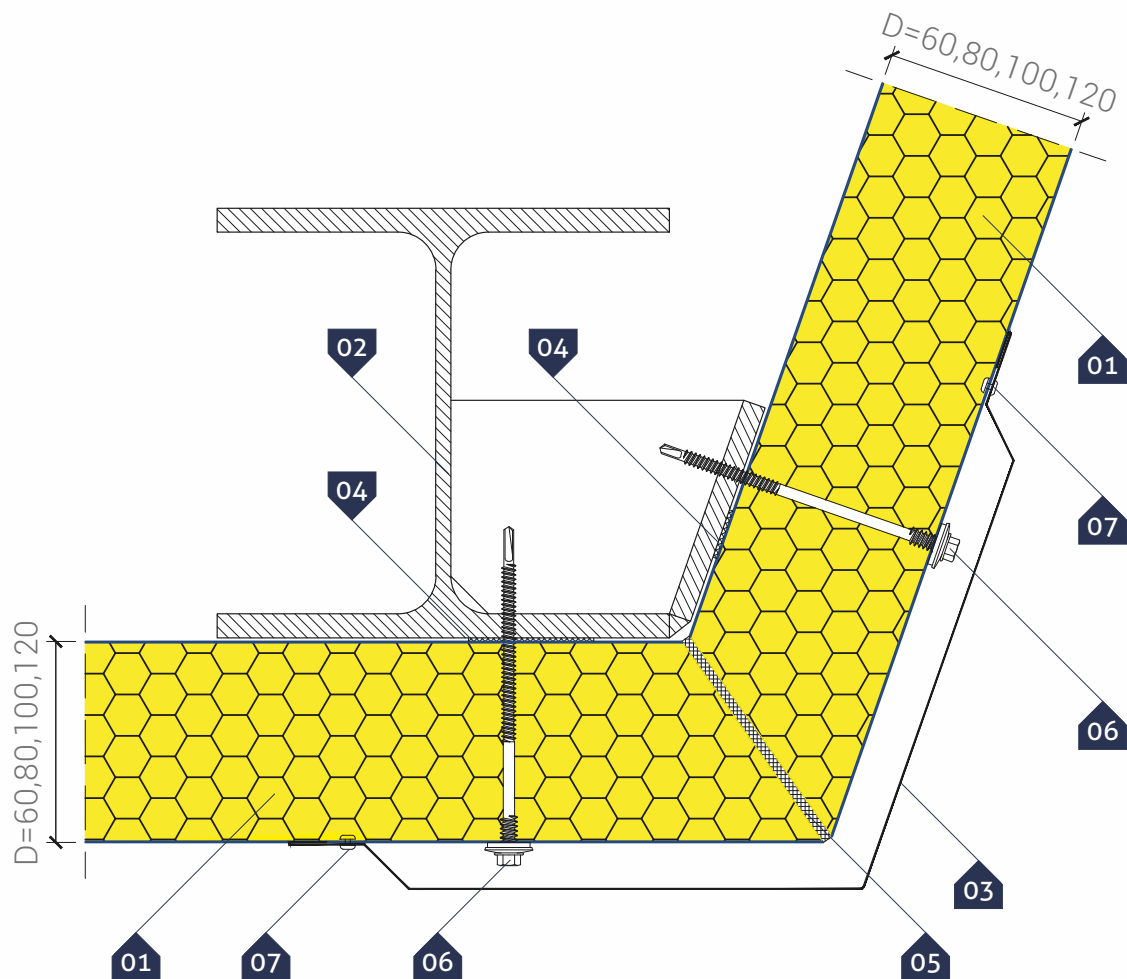
▷ **KEY:**

- 01. GS insPIRe® S wall panel
- 02. Steel post acc. to structure design
- 03. Corner flashing **OB-03**
- 04. Polyethylene, self-adhesive sealing tape (**PES**)*
- 05. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 06. Self-drilling connector for sandwich panels
- 07. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item

GS insPIRe® S wall sandwich panel (Standard cam-lock)

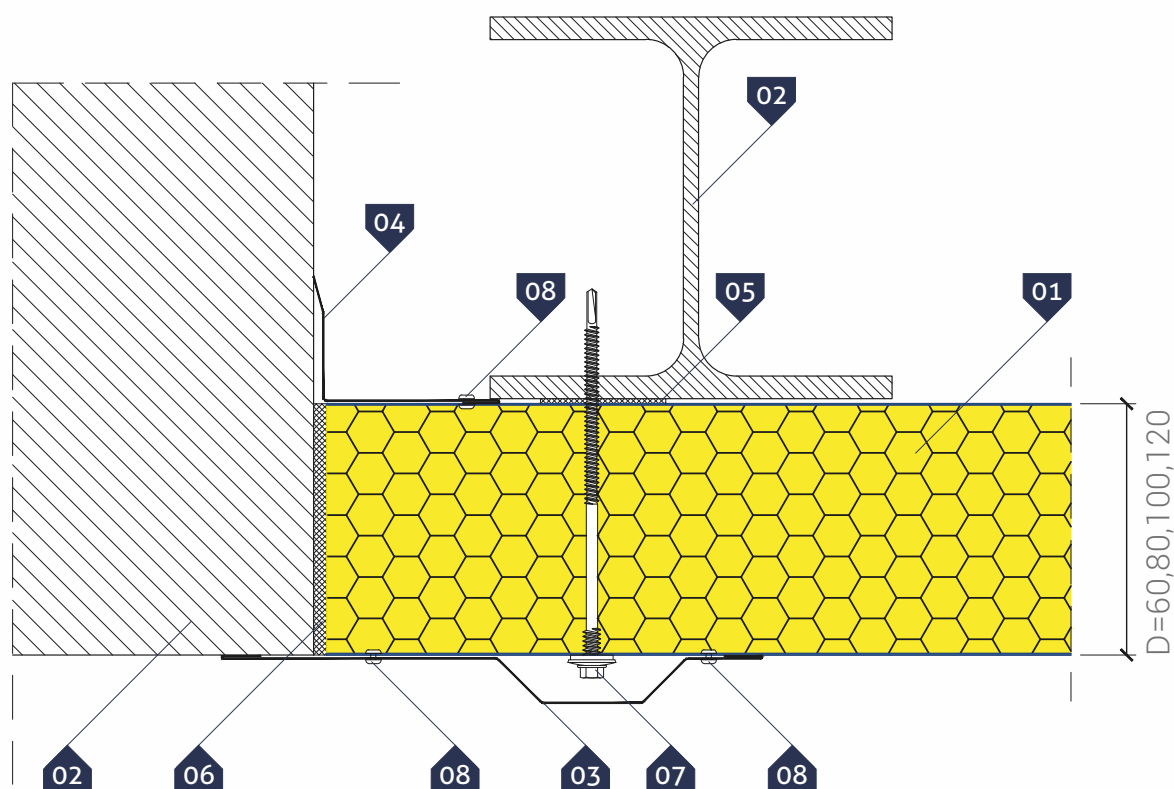
- ▷ HORIZONTAL ARRANGEMENT of panels
Detail of panel connection in an optional angle corner



▷ KEY:

- 01. GS insPIRe® S wall panel
- 02. Steel post acc. to structure design
- 03. Corner flashing **OB-03**
- 04. Polyethylene, self-adhesive sealing tape (**PES**)*
- 05. Polyurethane caulking foam
- 06. Self-drilling connector for sandwich panels
- 07. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item



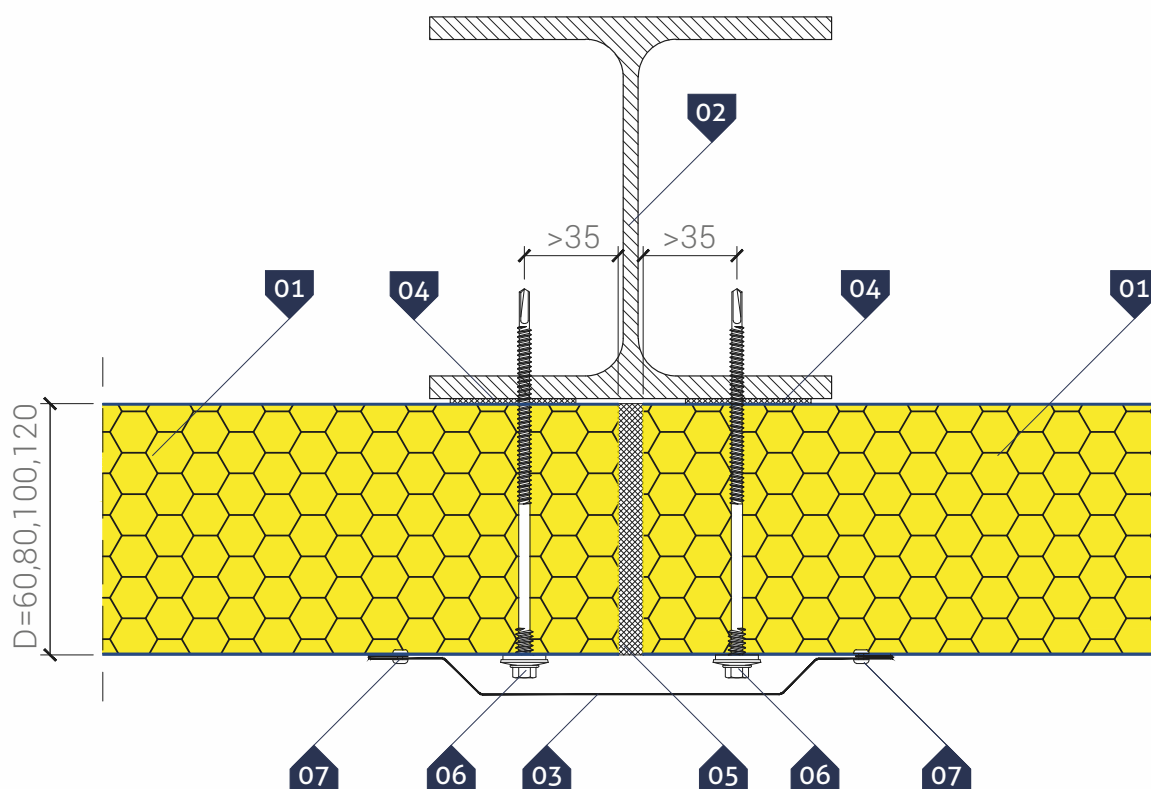
▷ **KEY:**

- 01. **GS insPIRe® S** wall panel
- 02. Blockwall and post acc. to structure design
- 03. Covering flashing **OB-19**
- 04. Inner corner flashing **OB-07**
- 05. Polyethylene, self-adhesive sealing tape (**PES**)*
- 06. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item

GS insPIRe® S wall sandwich panel (Standard cam-lock)

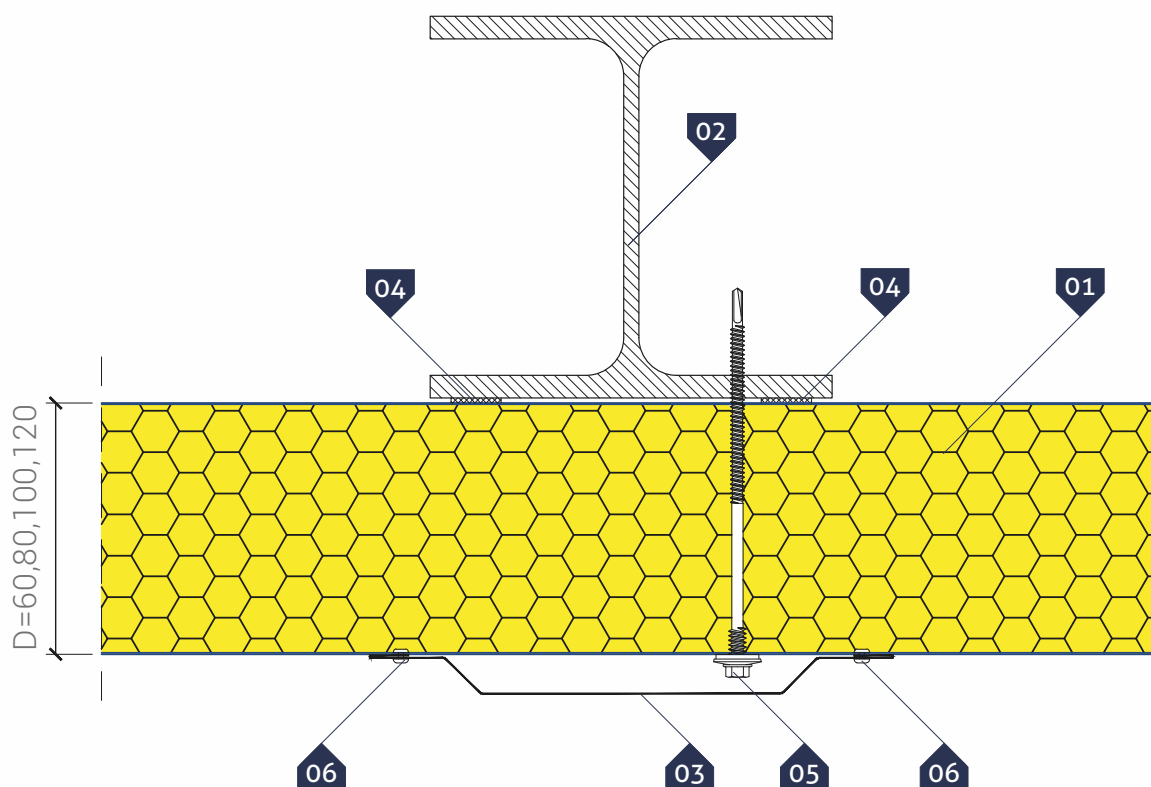
- ▷ HORIZONTAL ARRANGEMENT of panels
Detail of panel connection to main support



▷ **KEY:**

- 01. GS insPIRe® S wall panel
- 02. Steel post acc. to structure design
- 03. Covering flashin **OB-17**
- 04. Polyethylene, self-adhesive sealing tape (**PES**)*
- 05. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 06. Self-drilling connector for sandwich panels
- 07. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item



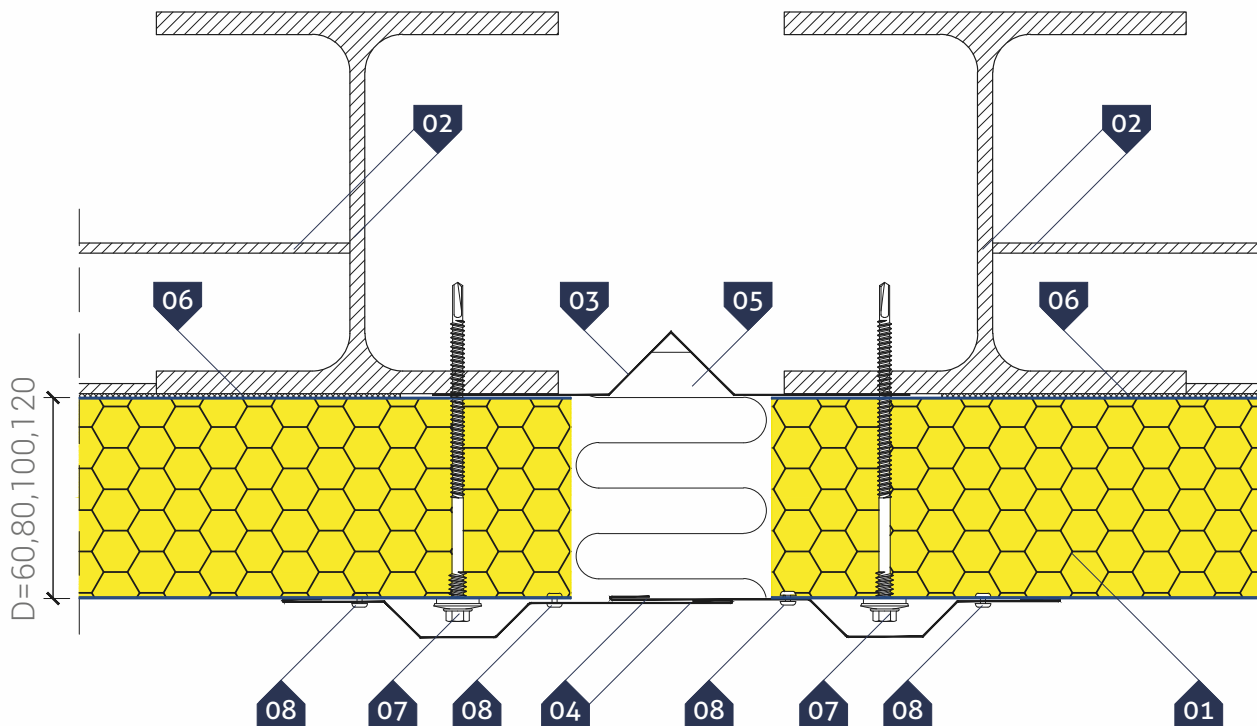
▷ **KEY:**

- 01. **GS insPIRe® S wall panel**
- 02. **Steel post acc. to structure design**
- 03. **Covering flashin OB-17**
- 04. **Polyethylene, self-adhesive sealing tape (PES)***
- 05. **Self-drilling connector for sandwich panels**
- 06. **Self-drilling connector for steel sheets or rivet 4.0 x 8.0**

* - a recommended item

GS insPIRe® S wall sandwich panel (Standard cam-lock)

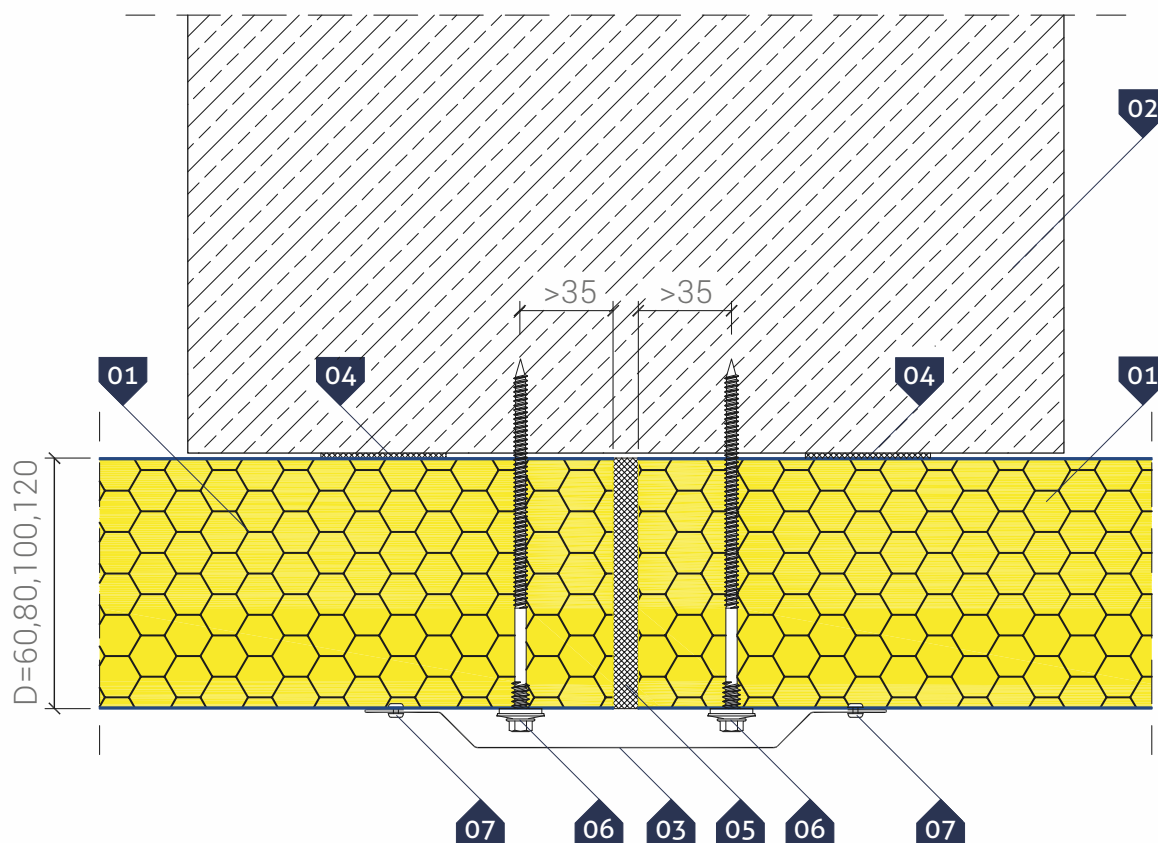
- ▷ HORIZONTAL ARRANGEMENT of panels
Detail of buildings expansion joint



▷ KEY:

- 01. GS insPIRe® S wall panel
- 02. Steel posts and transom acc. to structure design
- 03. Individual expansion joint flashing
- 05. Drip edge **OB-17**
- 05. Thermal insulation on the fastening
- 06. Polyethylene, self-adhesive sealing tape (**PES**)*
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item



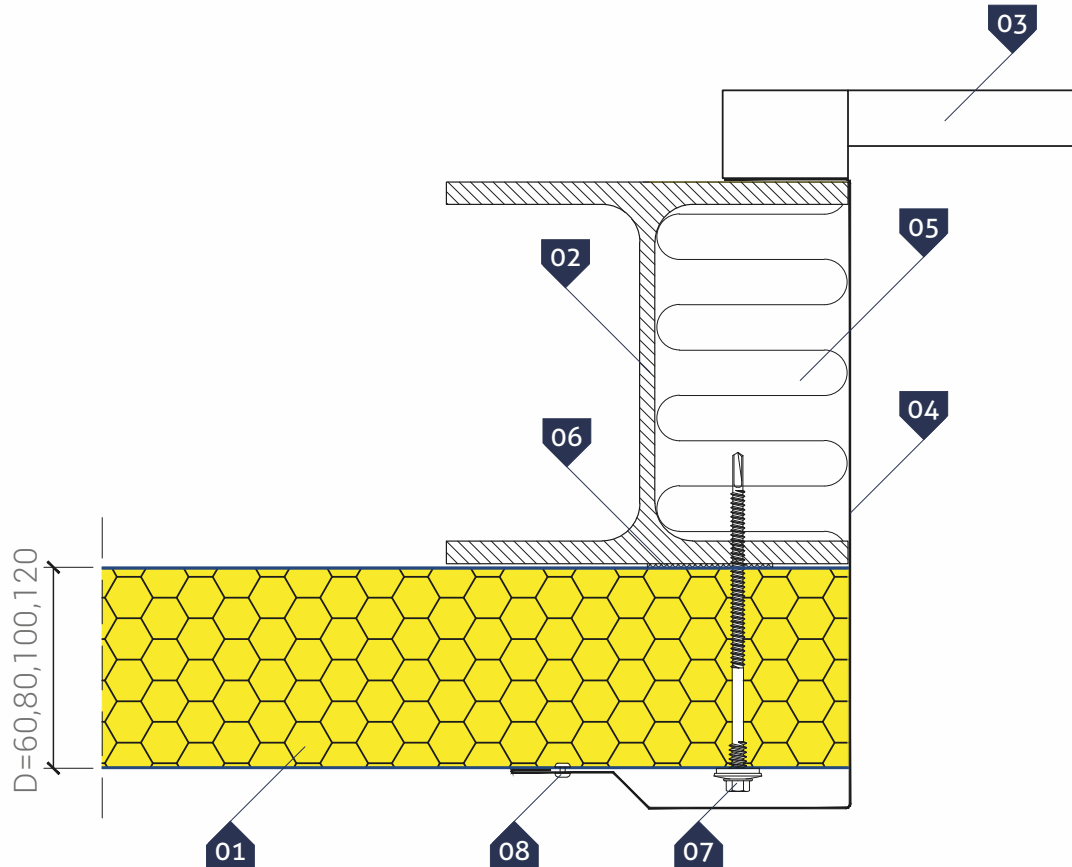
▷ **KEY:**

- 01. **GS insPIRe® S** wall panel
- 02. Reinforced concrete column acc. to structure design
- 03. Covering flashing **OB-17**
- 04. Polyethylene, self-adhesive sealing tape (**PES**)*
- 05. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 06. Connector for fastening of sandwich panels to concrete
- 07. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item

GS insPIRe® S wall sandwich panel (Standard cam-lock)

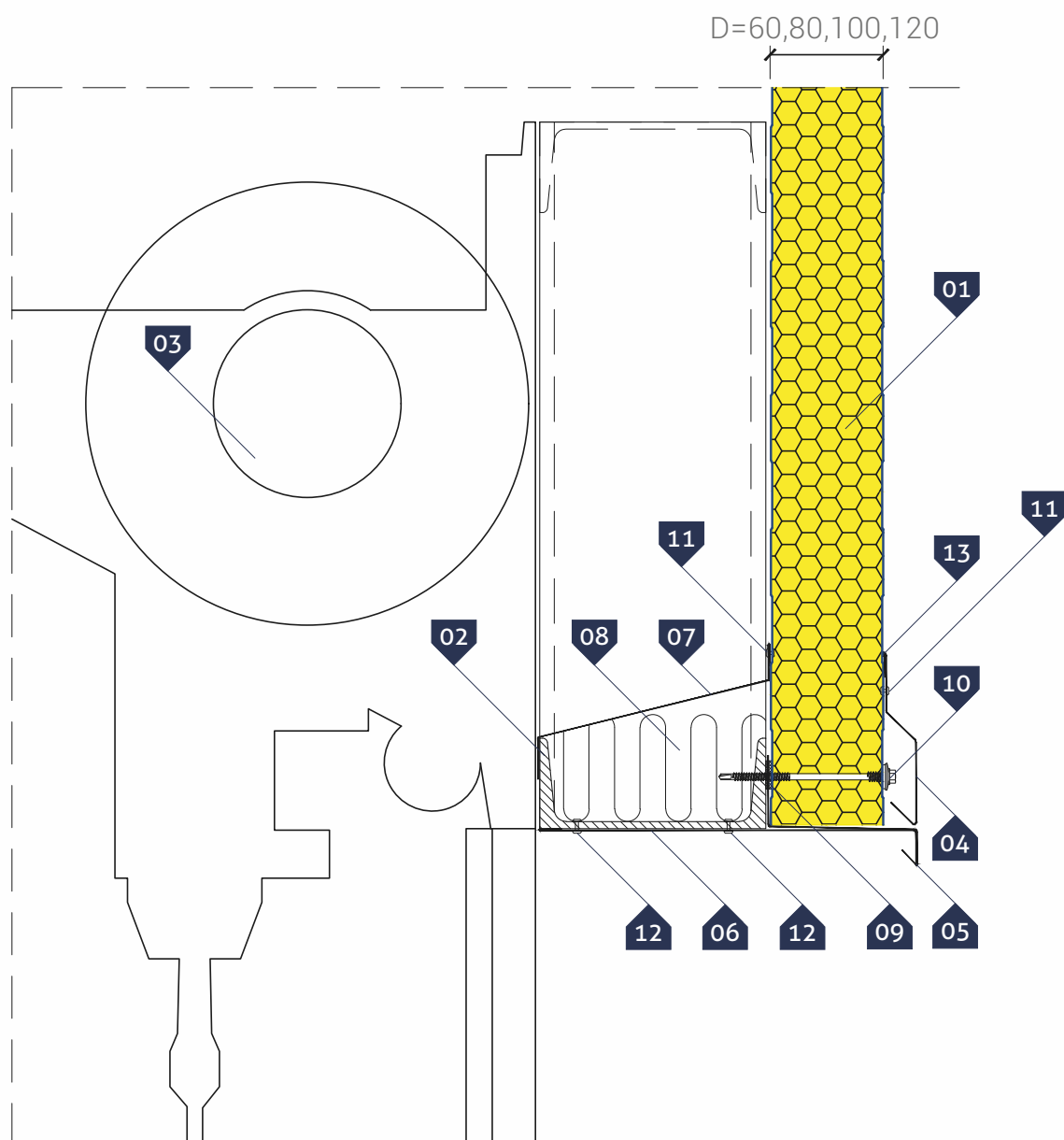
- ▷ HORIZONTAL ARRANGEMENT of panels
Detail of post to roller shutter door



▷ **KEY:**

- 01. GS insPIRe® S wall panel
- 02. Steel post acc. to structure design
- 03. Roller shutter door
- 04. Door flashing **OB-21**
- 05. Thermal insulation on the fastening
- 06. Polyethylene, self-adhesive sealing tape (**PES**)*
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item

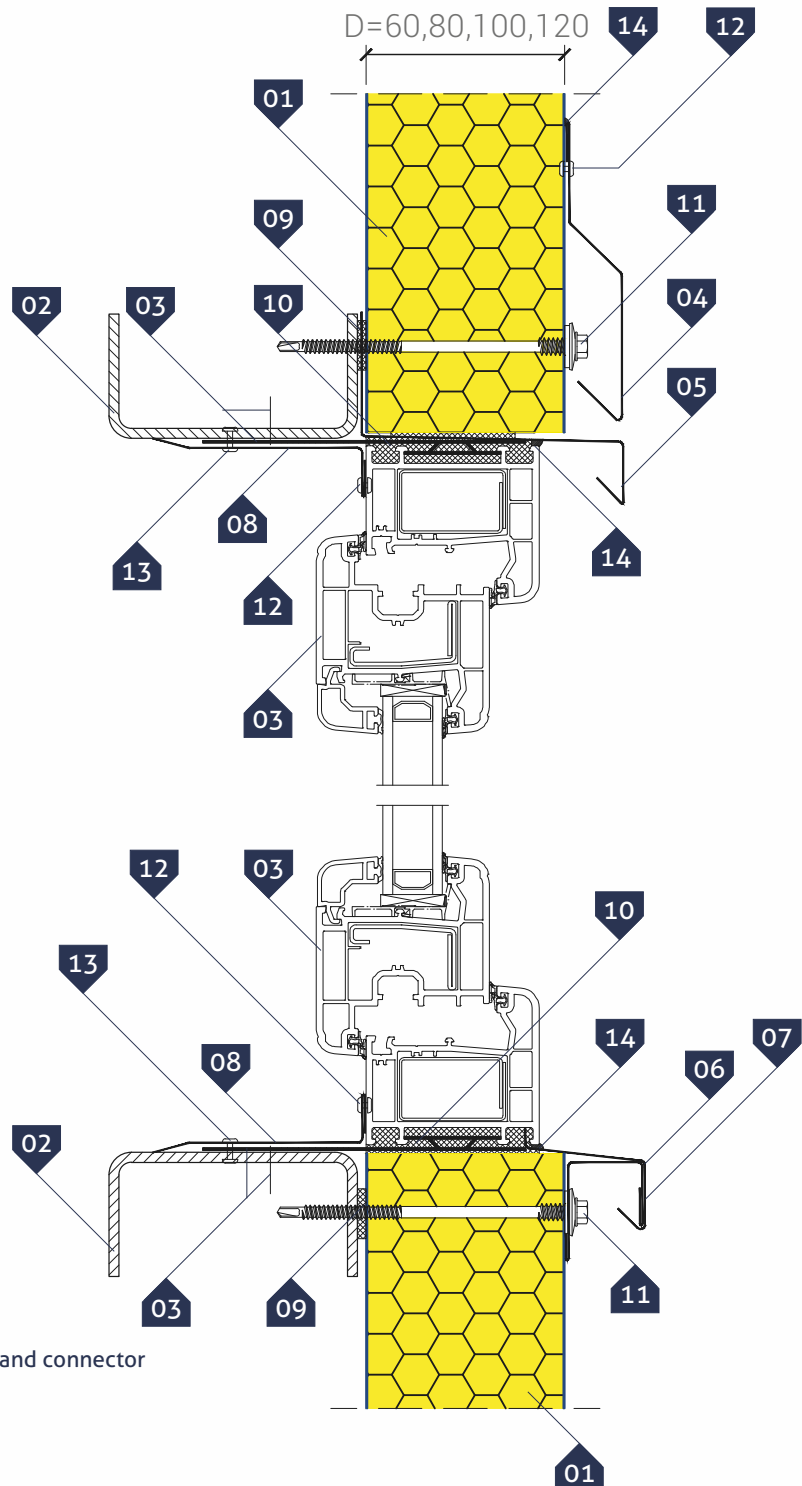


▷ **KEY:**

- 01. **GS insPIRe® S** wall panel
- 02. Transom acc. to structure design
- 03. Roller shutter door
- 04. Drip edge **OB-10**
- 05. Drip edge **OB-13**
- 05. Drip edge **OB-20**
- 07. Individual covering flashing
- 08. Thermal insulation on the fastening
- 09. Polyethylene, self-adhesive sealing tape (**PES**)*
- 10. Self-drilling connector for sandwich panels
- 11. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**
- 12. Blind rivet **4,8 x 15,1** (for the structure)
- 13. Neutral silicone sealant

GS insPIRe® S wall sandwich panel (Standard cam-lock)

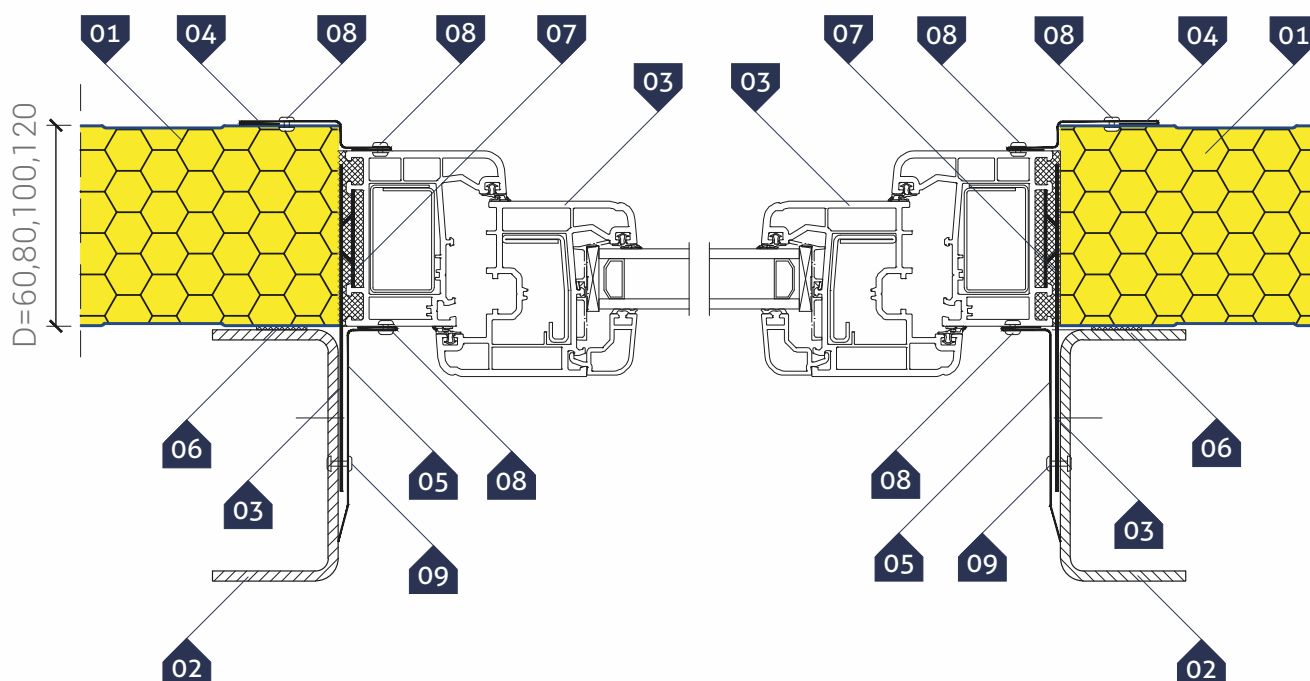
- ▷ HORIZONTAL ARRANGEMENT of panels
Detail of window mounting in a sandwich panel
Type I – verticle section



▷ KEY:

- 01. GS insPIRe® S wall panel
- 02. Transom acc. to structure design
- 03. PCV or aluminium window with a holder and connector
- 04. Drip edge OB-10
- 05. Drip edge OB-13
- 06. Cill OB-37
- 07. Rigid flashing OB-16
- 08. Individual internal corner
- 09. Polyethylene, self-adhesive sealing tape (PES)*
- 10. Polyethylene caulking foam
- 11. Self-drilling connector for sandwich panels
- 12. Self-drilling connector for steel sheets or rivet 4.0 x 8.0
- 13. Blind rivet 4,8 x 15,1 (for the structure)
- 14. Neutral silicone sealant

* - a recommended item

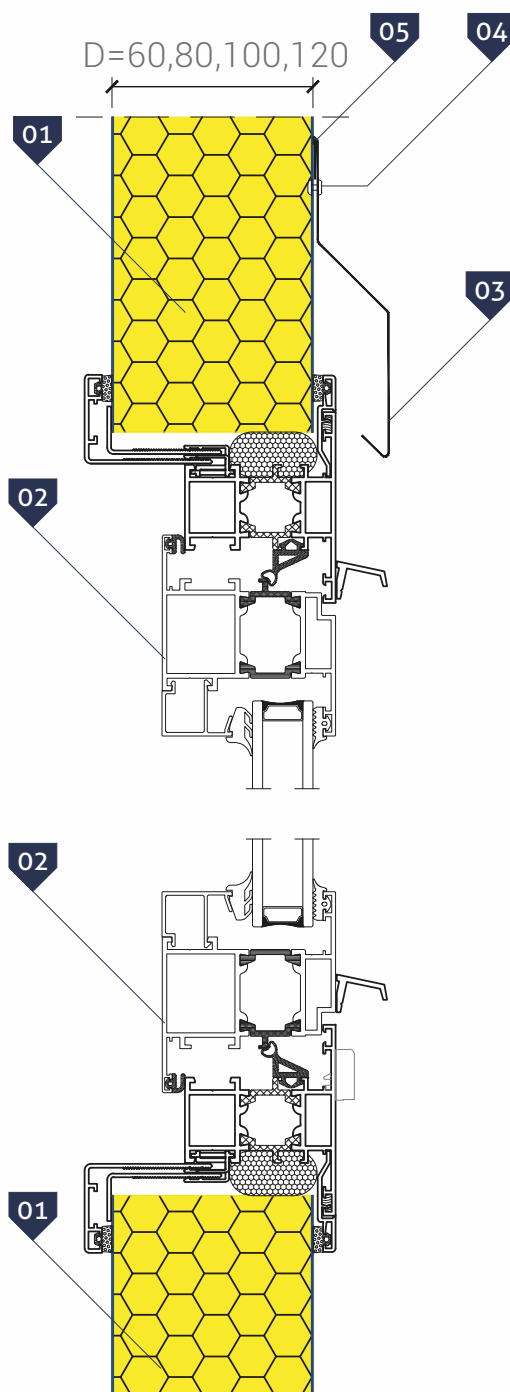


01. **GS insPIRE® S** wall panel
02. Transom acc. to structure design
03. **PVC** or **aluminium** window with a holder and connector
04. Individual covering flashing
05. Individual internal corner
06. Polyethylene, self-adhesive sealing tape (**PES**)*
07. Polyethylene caulking foam
08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**
09. Blind rivet **4,8 x 15,1** (for the structure)

* - a recommended item

GS insPIRe® S wall sandwich panel (Standard cam-lock)

- ▷ HORIZONTAL ARRANGEMENT of panels
Detail of window mounting in a sandwich panel
Type II – verticle section

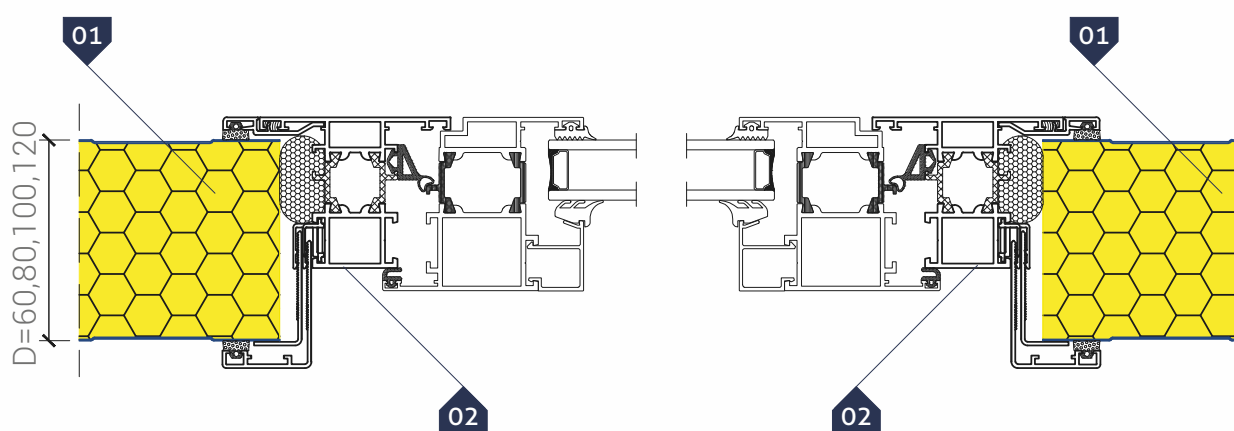


▷ **KEY:**

- 01. GS insPIRe® S wall panel
- 02. PVC or aluminium window with a holder and connector
- 03. Drip edge OB-11 (option)
- 04. Self-drilling connector for steel sheets or rivet 4.0 x 8.0
- 05. Neutral silicone sealant

GS insPIRe® S wall sandwich panel (Standard cam-lock)

- ▷ HORIZONTAL ARRANGEMENT of panels
- Detail of window mounting in a sandwich panel
- Type II – horizontal section



▷ KEY:

1. GS insPIRe® S wall panel
2. PVC or aluminium window with a holder and connector

APPLICATION

GS insPIRe® U wall panel is designed for outer screening walls and inner partition walls in structural frame buildings. Panels can be mounted in both vertical and horizontal position, as single-span or multi-span wall elements. Hidden cam-lock, which is not visible from the outside makes the elevation look very functional and attractive architecturally.

PHYSICAL PROPERTIES

GS insPIRe® U wall panel is produced in the five thicknesses of the core: **60, 80, 100, 120 i 140 mm**. Panel facings are made of sheet metal galvanised on both sides according to **EN 10346** with organic polyester coating **25µm** thick. Thermal insulation core of the panels is a rigid polyisocyanurate (PIR) foam with a thickness of **40 kg/m³ (+/-10%)**. The heat conductivity calculation value of the foam is: **$\lambda = 0,022 \text{ W/m}\cdot\text{K}$** (for 2020 new panels will be available **MAX** with a core and a coefficient of **$\lambda = 0,019 \text{ W/m}\cdot\text{K}$**). **Modular width** of plate is **1000 mm**. The standard panel length is between **2.0 to 12 m**. On special request we deliver panels shorter than **2 m** and longer than **12 m**, with a maximum length of **16.5 meters**. Water and air tightness of panel joints is assured by impregnated polyurethane seals (**PUS**) applied in the manufacturing process.

Thickness [mm]	Weight [kg/m²]		Modular width [mm]	Length: typical/available [m]	Lining standard RAL colours	
	facings 0,5/0,5 mm**	facings 0,5/0,4 mm**			external linings*	internal linings*
60	11,3	10,5	1000	2,0 - 12,0 / 16,5	3000, 5010, 6011, 7016, 7035, 8017, 9002, 9006, 9007, 9010	9002, 9010
80	12,1	11,3				
100	12,9	12,1				
120	13,7	12,9				
140	14,5	13,7				

* available colors depending on the thickness of the cladding, panels thicknesses and modular widths (details from the Sales Representative)

**typical lining thicknesses; also available 0.6 and 0.7 mm (details from our Sales Representative)

Thermal performance of panels depends on the thickness of the core and is expressed as a coefficient of heat transfer through a space dividing element (shown in the table below). Acoustic parameters were determined on the basis of **EN ISO 10140-3** and **EN-ISO 354**. Coldstore plates can be used as partitions of the requirements of sound insulation no greater than those specified below. Resistance to chemical corrosion - sandwich panels can be used in environments with atmosphere corrosiveness category C1, C2, C3 according to **EN ISO 12944-2**.

TECHNICAL PARAMETERS OF PIR CORE

Thickness [mm]	Heat-transfer coefficient U [W/m²·K]	Acoustic insulation	Reaction to fire	Fire resistance	NRO
	EN 14509	EN ISO 717-1	EN 13501-1	EN 13501-2	PN-B-02867
60	0,44*/ -	R _w = 23 dB R _{a1} = 21 dB R _{a2} = 20 dB	B-s1,d0	-	„NRO“
80	0,29*/ 0,26**				
100	0,23*/ 0,20**			EI 15	
120	0,19*/ 0,16**				
140	0,16*/0,14**			EI 30	

* value of U-factor for traditional core panels with a coefficient of $\lambda = 0,022 \text{ W/m}\cdot\text{K}$

** value of U-factor for PIR MAX core panels with a coefficient of $\lambda = 0,019 \text{ W/m}\cdot\text{K}$

PACKING

GS insPIRe® U sandwich panels are provided in packs on pallets allowing for their relocation. The table below specifies number of panels in a pack depending on panel thickness.

Panel thickness [mm]	60	80	100	120	140
Maximum number of panels in one pack	19	14	11	9	8

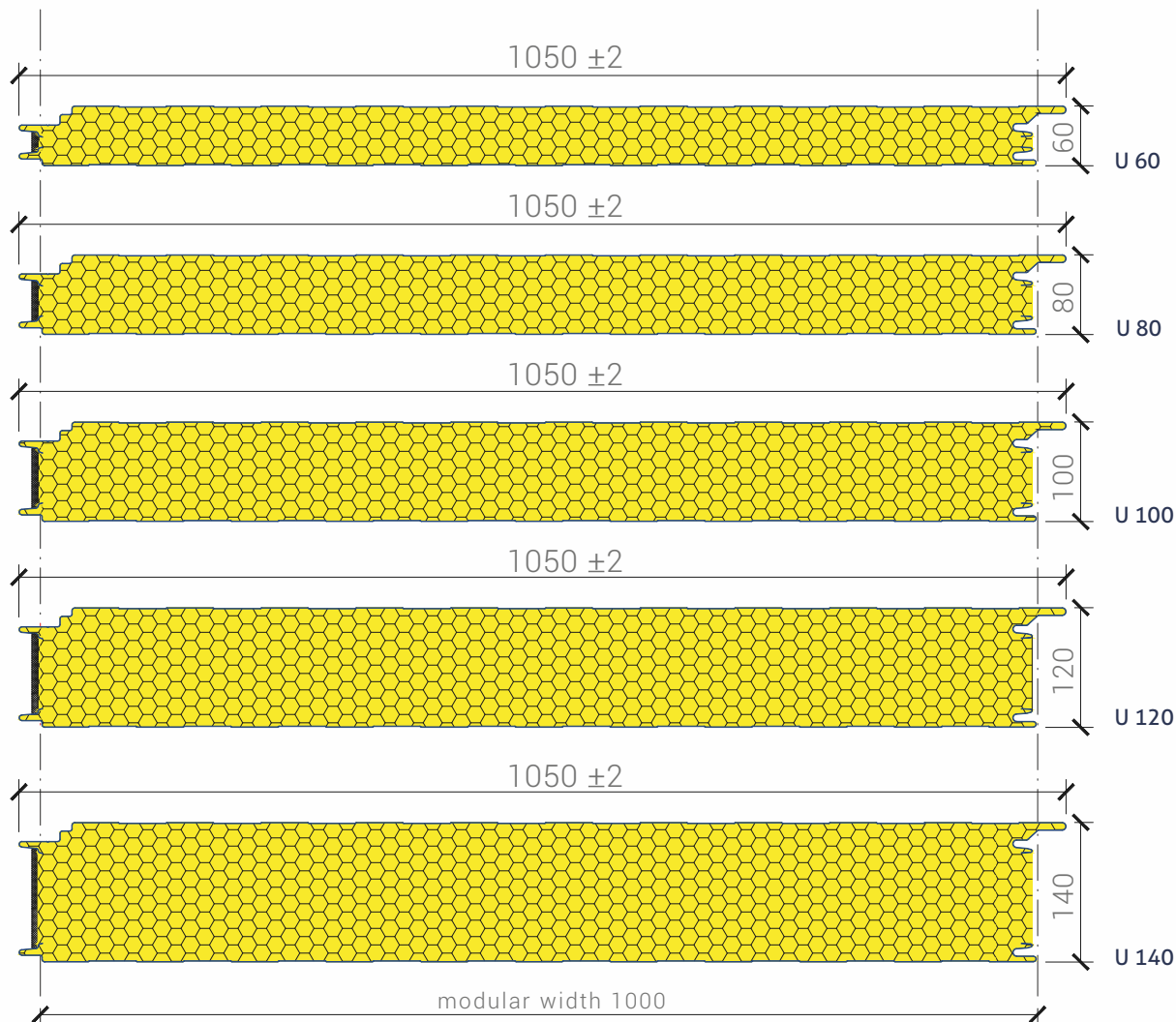
GS insPIRe® U wall sandwich panel (Hidden cam-lock)

▷ GS insPIRe® U panel manufacturing program:

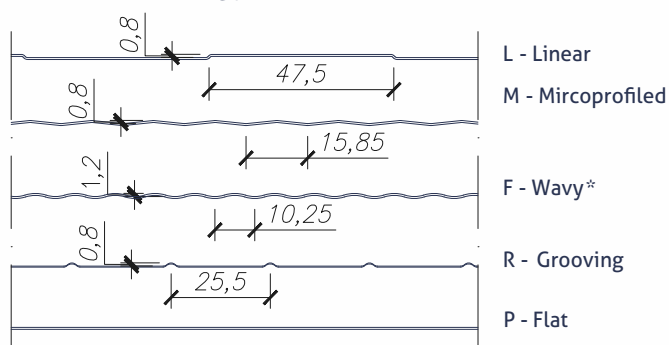
- ▷ panel thicknesses
- ▷ profiles of outer and inner facing



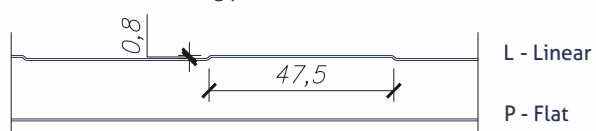
▷ PANEL THICKNESS



External lining profiles



Internal lining profiles



* - Profiling used for new orders as of February 2020. In the case when ordering panels for existing casings, please state this fact when placing the order and provide the previous order number as a reference.

TABLE OF ALLOWED LOADS FOR GS insPIRe® U SANDWICH PANEL

Load tables are prepared according to EN 14 509 for panels with PIR core, linings in bright colors with a thickness of 0,5 mm and for internal temperature $T = 20^{\circ}\text{C}$. Deflection condition assumed as $L/100$. For other data, separate calculations should be performed. Minimum width of supports 40/60 mm. Detailed tables of permissible loads are available on the website.

GS insPIRe® U mounted as a single-span element, loaded in direction: to support (pressure)

Panel thickness	The load due to:	The maximum load [kN/m ²] on the span length [m]:										
		1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5
60	SGN (q_d)	7,82	5,87	4,60	3,19	2,35	1,80	1,42	1,15	0,95	0,80	0,68
	SGU (q_k)	5,90	3,53	2,22	1,43	0,95	0,64	0,43	0,30	0,21	0,14	0,10
80	SGN (q_d)	8,90	6,67	6,15	4,27	3,14	2,40	1,90	1,54	1,27	1,07	0,91
	SGU (q_k)	8,63	5,45	3,60	2,45	1,71	1,21	0,88	0,64	0,47	0,35	0,26
100	SGN (q_d)	10,18	7,64	6,11	5,34	3,92	3,01	2,37	1,92	1,59	1,34	1,13
	SGU (q_k)	11,92	7,74	5,26	3,69	2,65	1,93	1,43	1,08	0,82	0,63	0,49
120	SGN (q_d)	12,41	9,31	7,44	6,41	4,71	3,61	2,85	2,31	1,91	1,61	1,36
	SGU (q_k)	14,85	9,85	6,86	4,93	3,61	2,70	2,04	1,56	1,21	0,95	0,75
140	SGN (q_d)	11,45	8,59	6,87	5,73	5,50	4,21	3,32	2,69	2,23	1,87	1,59
	SGU (q_k)	23,54	15,49	10,70	7,62	5,55	4,12	3,11	2,38	1,85	1,45	1,15

GS insPIRe® U mounted as a multi-span element, loaded in direction: to support (pressure)

Panel thickness	The load due to:	The maximum load [kN/m ²] on the span length [m]:										
		1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5
60	SGN (q_d)	6,91	5,09	3,26	2,26	1,66	1,27	1,01	0,82	0,67	0,57	0,48
	SGU (q_k)	6,19	3,78	2,42	1,61	1,09	0,76	0,54	0,39	0,28	0,21	0,16
80	SGN (q_d)	6,91	5,18	4,14	3,02	2,22	1,70	1,34	1,09	0,90	0,75	0,64
	SGU (q_k)	8,94	5,72	3,83	2,65	1,88	1,36	1,00	0,75	0,57	0,44	0,34
100	SGN (q_d)	6,91	5,18	4,14	3,45	2,78	2,13	1,68	1,36	1,12	0,94	0,81
	SGU (q_k)	12,25	8,03	5,52	3,91	2,84	2,10	1,58	1,21	0,93	0,73	0,58

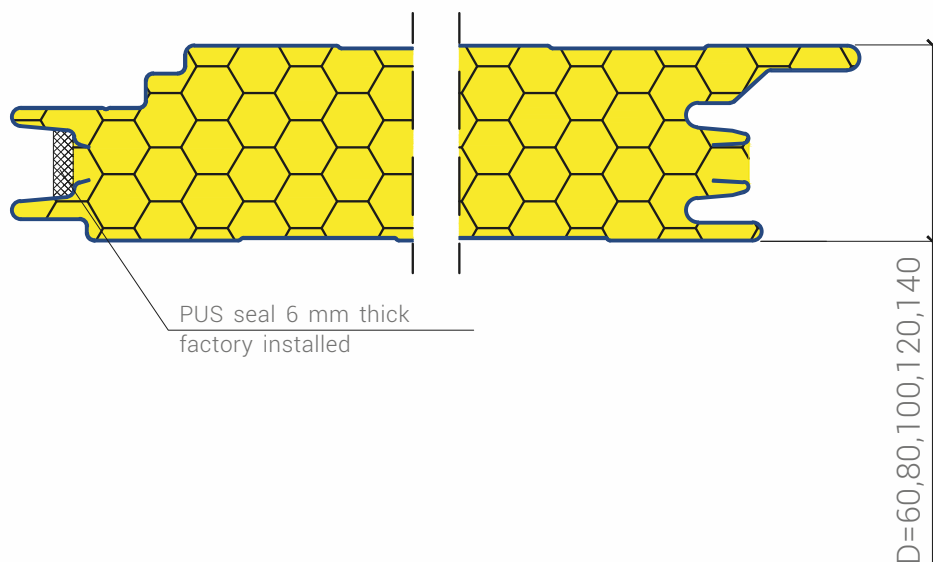
Panel thickness	The load due to:	The maximum load [kN/m ²] on the span length [m]:										
		1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5
60	SGN (q_d)	3,94	2,99	2,23	1,45	1,01	0,75	0,57	0,45	0,37	0,31	0,26
	SGU (q_k)	6,74	4,54	3,20	2,32	1,71	1,28	0,98	0,75	0,59	0,46	0,37
80	SGN (q_d)	6,61	4,95	3,17	2,05	1,42	1,04	0,80	0,63	0,51	0,42	0,35
	SGU (q_k)	9,39	6,45	4,71	3,51	2,66	2,06	1,62	1,28	1,03	0,83	0,67
100	SGN (q_d)	7,57	5,66	4,11	2,65	1,84	1,34	1,02	0,80	0,65	0,53	0,45
	SGU (q_k)	12,69	8,79	6,49	4,94	3,82	2,99	2,38	1,91	1,55	1,27	1,05
120	SGN (q_d)	9,32	6,96	5,13	3,31	2,29	1,67	1,26	0,99	0,80	0,66	0,55
	SGU (q_k)	15,55	10,86	8,09	6,26	4,91	3,91	3,15	2,56	2,10	1,75	1,45
140	SGN (q_d)	8,72	6,49	5,17	4,30	3,02	2,19	1,65	1,28	1,02	0,84	0,69
	SGU (q_k)	24,80	17,25	12,79	9,79	7,61	6,01	4,81	3,89	3,17	2,62	2,17

Panel thickness	The load due to:	The maximum load [kN/m ²] on the span length [m]:										
		1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5
60	SGN (q_d)	2,76	2,99	2,23	1,45	1,01	0,75	0,57	0,45	0,37	0,31	0,26
	SGU (q_k)	6,94	4,70	3,33	2,42	1,80	1,36	1,05	0,82	0,65	0,52	0,42
80	SGN (q_d)	2,76	2,07	1,66	1,38	1,18	0,87	0,66	0,52	0,43	0,35	0,30
	SGU (q_k)	9,62	6,62	4,85	3,63	2,77	2,15	1,70	1,35	1,09	0,88	0,73
100	SGN (q_d)	2,76	2,07	1,66	1,38	1,18	1,04	0,85	0,67	0,54	0,45	0,38
	SGU (q_k)	12,94	8,99	6,65	5,07	3,94	3,10	2,47	2,00	1,63	1,34	1,11
120	SGN (q_d)	2,76	2,07	1,66	1,38	1,18	1,04	0,92	0,82	0,66	0,55	0,46
	SGU (q_k)	15,82	11,08	8,26	6,41	5,04	4,03	3,25	2,65	2,19	1,82	1,52
140	SGN (q_d)	2,76	2,07	1,66	1,38	1,18	1,04	0,92	0,83	0,75	0,63	0,53
	SGU (q_k)	25,15	17,54	13,02	9,98	7,77	6,15	4,94	4,01	3,28	2,71	2,25

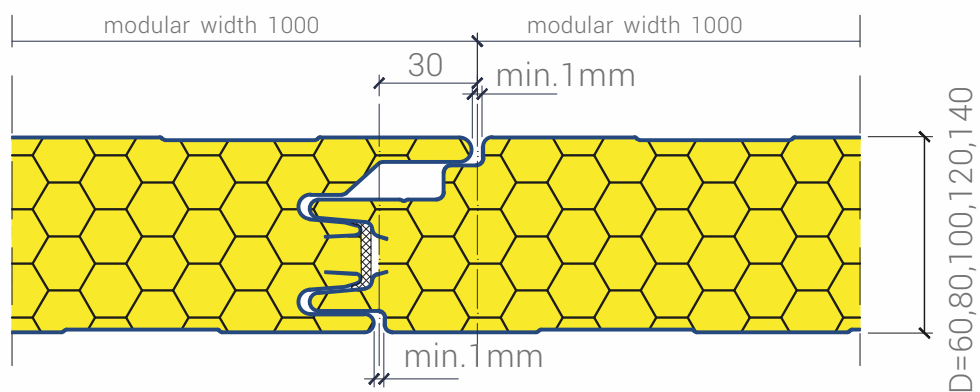
Selected details of cladding made of GS insPIRe® U sandwich panels

Shape of cam-lock. Details of panel connection	048
Details of panel connection. PM1 spacer	049
VERTICAL ARRANGEMENT of panels	
Details of panel connection to ground beam - Type I	050
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HORIZONTAL ARRANGEMENT of panels	
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Detail of post to roller shutter door	074
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Detail of window mounting in a sandwich panel – Type I – vertical section	076
Detail of window mounting in a sandwich panel – Type I – horizontal section	077
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GS insPIRe® U wall sandwich panel (Hidden cam-lock) bent	080
GS insPIRe® U wall sandwich panel (Hidden cam-lock) bent	081
GS insPIRe® U corner wall panels bent	

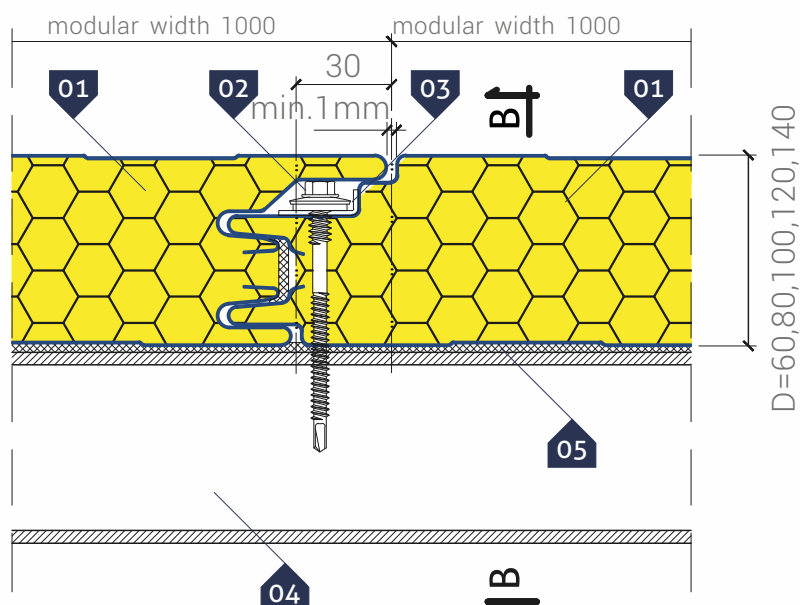
Shape of panels cam-lock



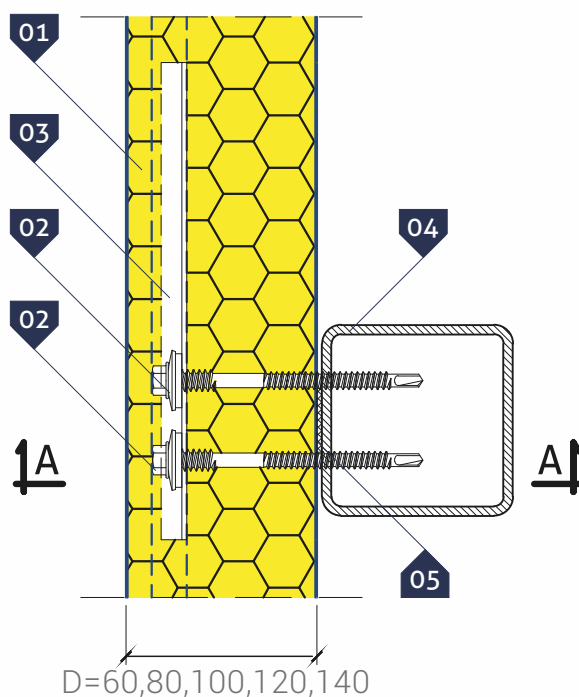
Detail of connection between two panels



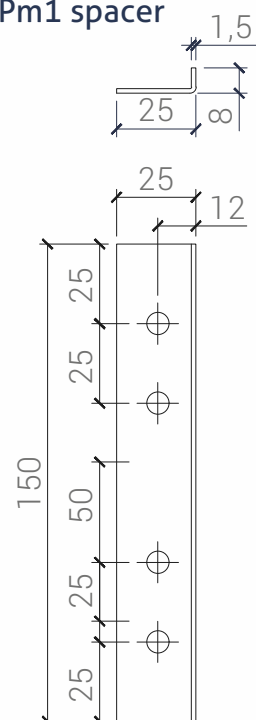
A-A cross-section



B-B cross-section



Pm1 spacer

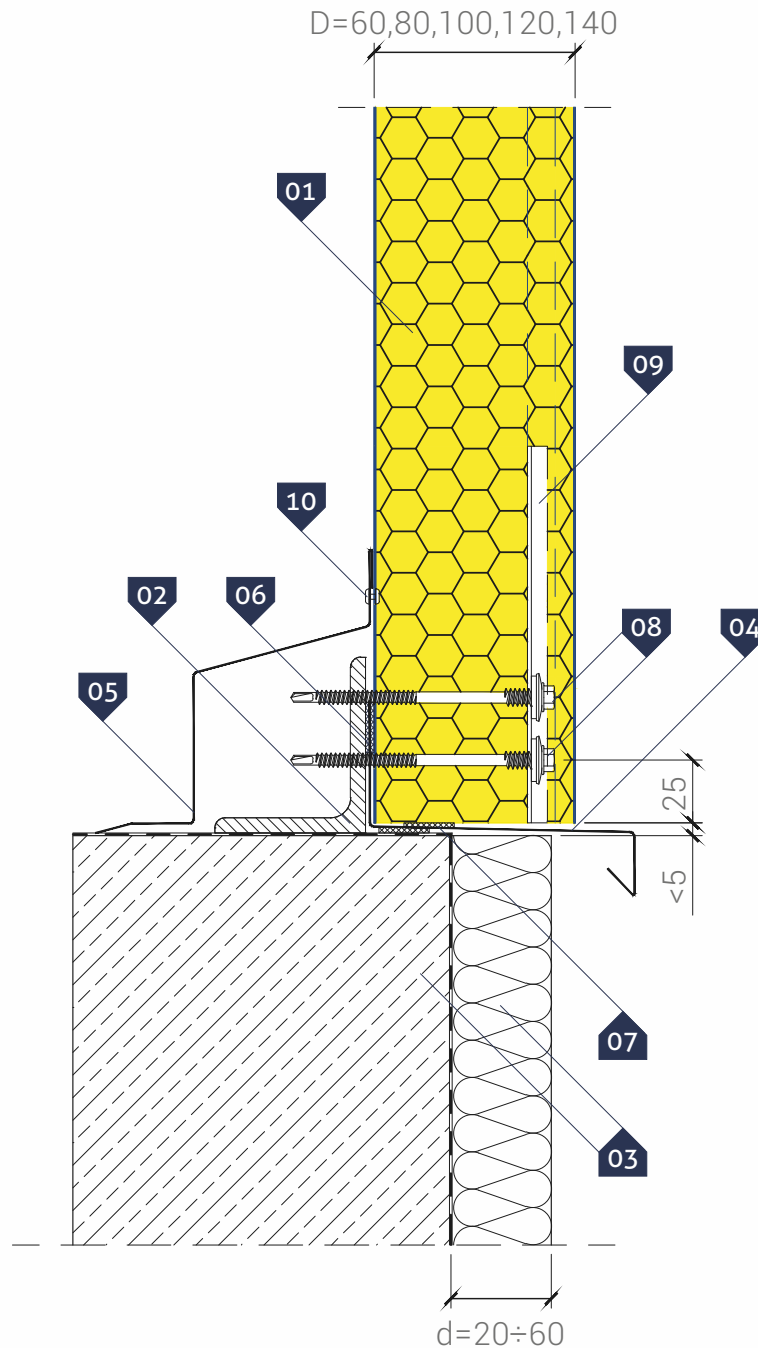


KEY:

- 01. GS insPIRe® U wall panel
- 02. Self-drilling connector for sandwich panels
- 03. PM1 spacer
- 04. Transom acc. to structure design
- 05. Polyethylene, self-adhesive sealing tape (PES)*

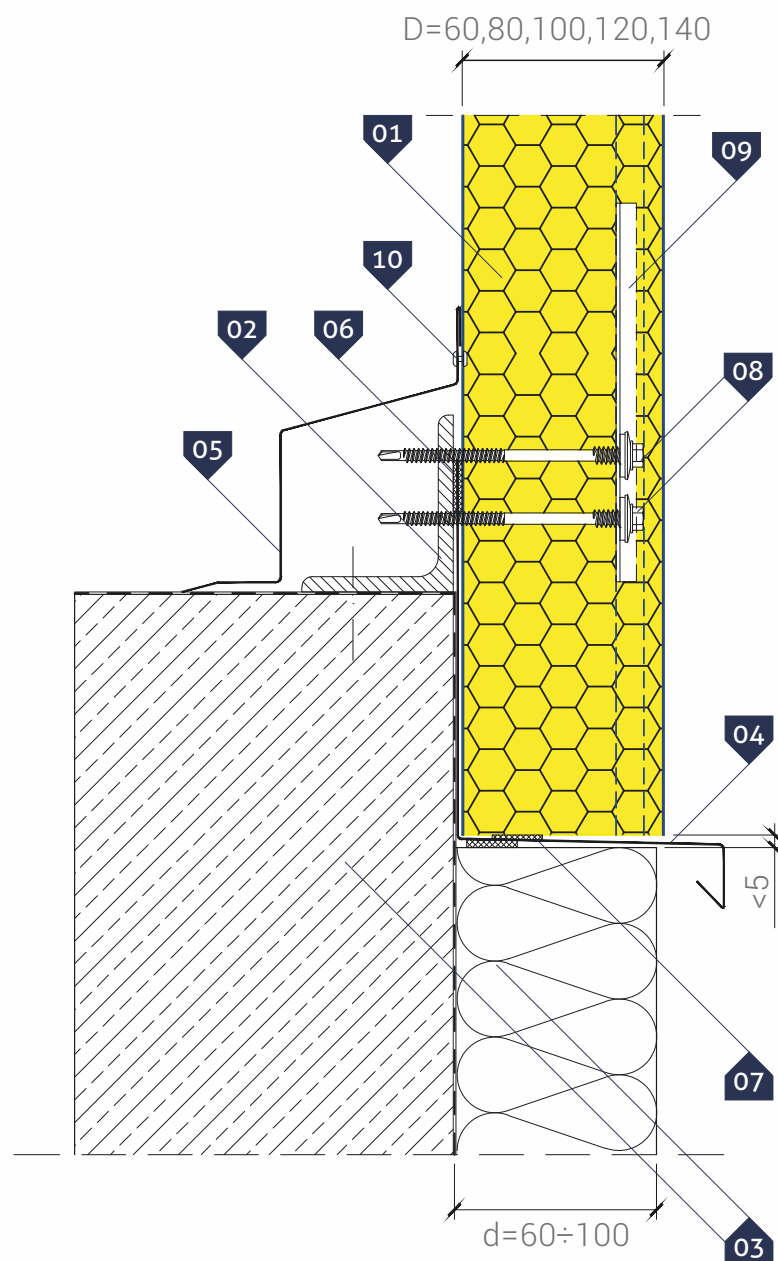
NOTE: Fasten each panel along its width to a structure with a minimum of two connectors

* - a recommended item



- ▷ **KEY:**
- 01. **GS insPIRe® U wall panel**
 - 02. Steel section acc. to structure design
 - 03. Ground beam with insulation and thermal insulation acc. to detailed design
 - 04. Drip edge **OB-13**
 - 05. Covering flashing **OB-09**
 - 06. Polyethylene, self-adhesive sealing tape (**PES**)*
 - 07. Impregnated polyurethane seal
 - 08. Self-drilling connector for sandwich panels
 - 09. **PM1** spacer
 - 10. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

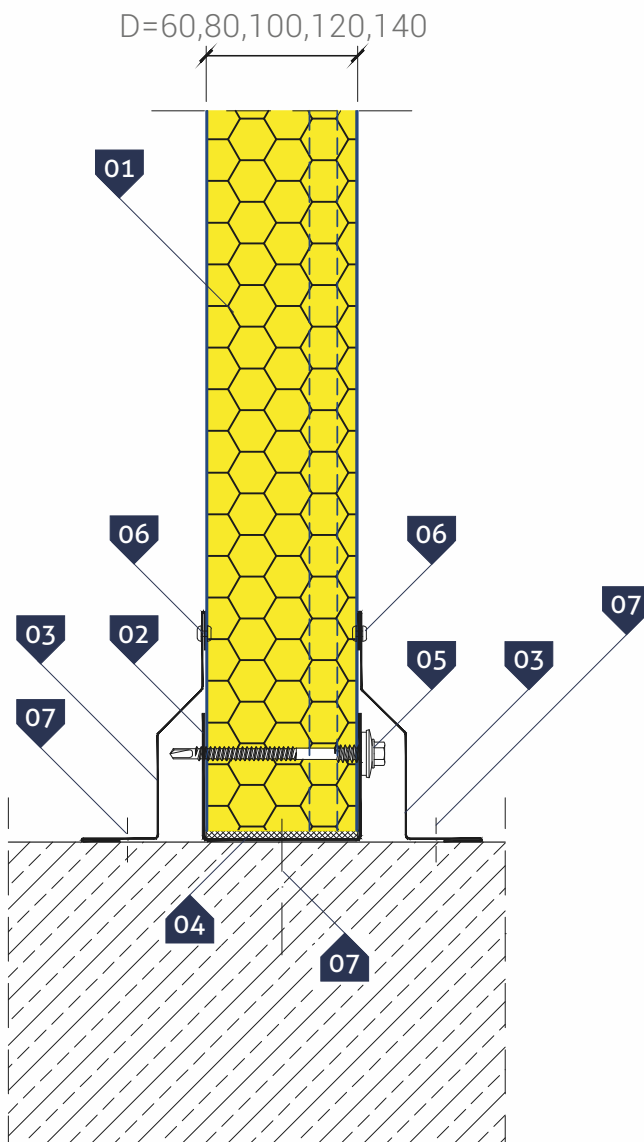
* - a recommended item



▷ **KEY:**

- 01. GS insPIRe® U wall panel
- 02. Steel section acc. to structure design
- 03. Ground beam with insulation and thermal insulation acc. to detailed design
- 04. Eaves **OB-13** (extended)
- 05. Covering flashing **OB-09**
- 06. Polyethylene, self-adhesive sealing tape (**PES**)*
- 07. Impregnated polyurethane seal
- 08. Self-drilling connector for sandwich panels
- 09. **PM1** spacer
- 10. Tight blind rivet **4,8 x 9,5**

* - a recommended item

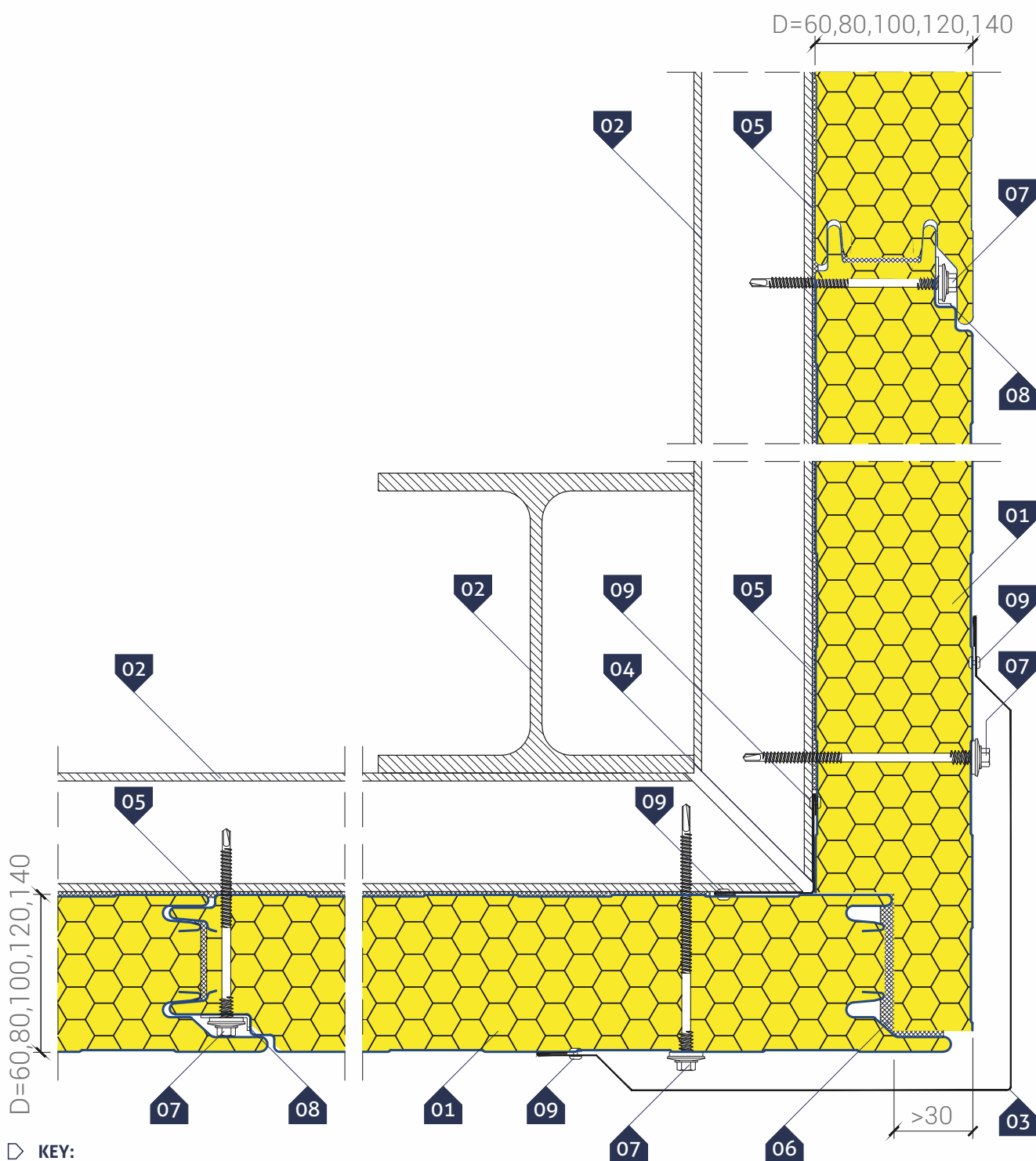


▷ **KEY:**

- 01. **GS insPIRe® U** wall panel
- 02. Edge channel section **OB-42**
- 03. Covering flashing **OB-05**
- 04. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 05. Self-drilling connector for sandwich panels
- 06. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**
- 07. Steel expansion joint for fast assembly

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

- VERTICAL ARRANGEMENT of panels
- Detail of panel connection in a corner
- Type I



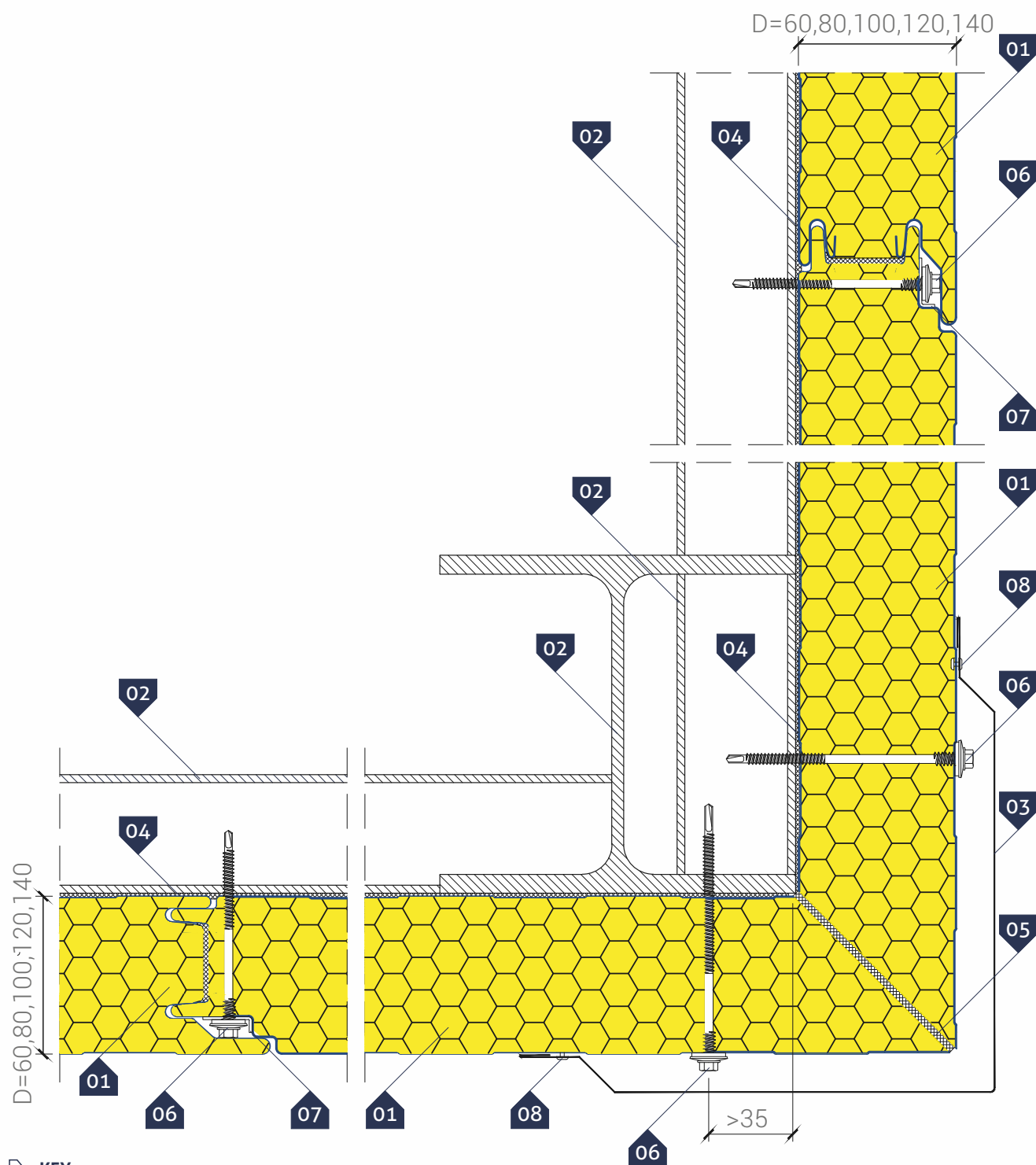
KEY:

- 01. GS insPIRe® U wall panel
- 02. Steel post and transom acc. to structure design
- 03. Corner flashing **OB-03**
- 04. Corner flashing **OB-02**
- 05. Polyethylene, self-adhesive sealing tape (**PES**)*
- 06. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 07. Self-drilling connector for sandwich panels
- 08. **PM1** spacer
- 09. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

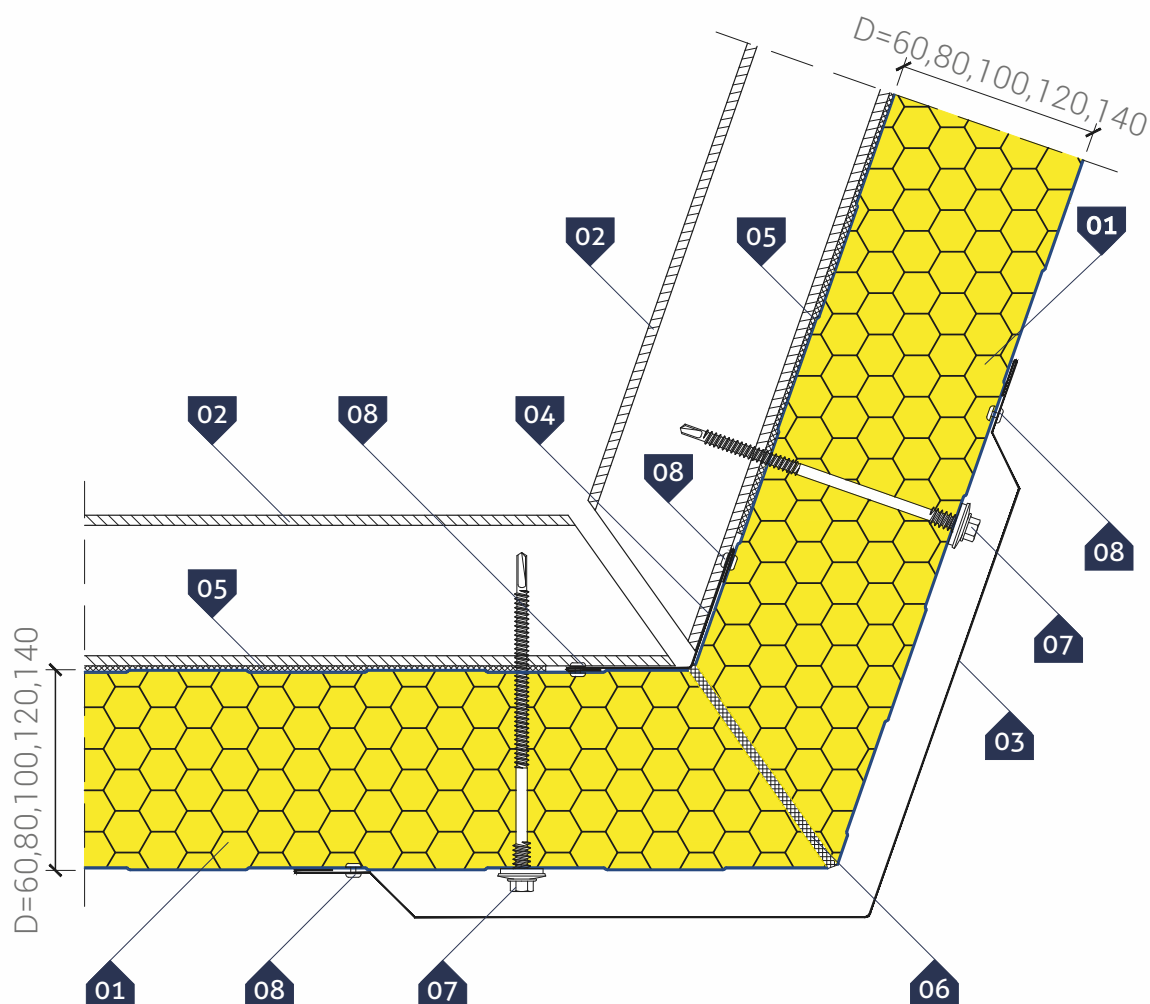
- ▷ VERTICAL ARRANGEMENT of panels
Detail of panel connection in a corner
Type II



▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. Steel post and transom acc. to structure design
- 03. Corner flashing OB-03
- 04. Polyethylene, self-adhesive sealing tape (PES)*
- 05. Impregnated polyurethane seal (PURS) or polyurethane caulking foam
- 06. Self-drilling connector for sandwich panels
- 07. PM1 spacer
- 08. Self-drilling connector for steel sheets or rivet 4.0 x 8.0

* - a recommended item



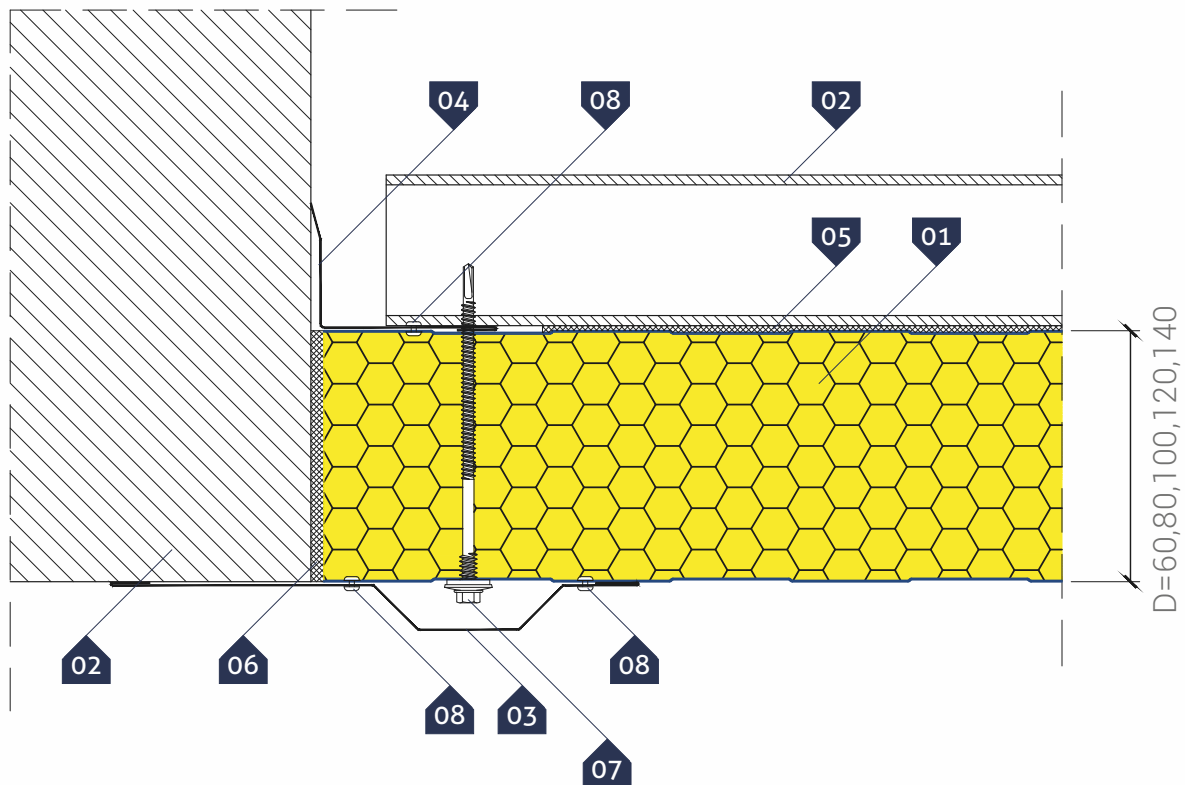
▷ **KEY:**

- 01. GS insPIRe® U wall panel
- 02. Transom acc. to structure design
- 03. Corner flashing **OB-03**
- 04. Corner flashin **OB-02**
- 05. Polyethylene, self-adhesive sealing tape (**PES**)*
- 06. Polyurethane caulking foam
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

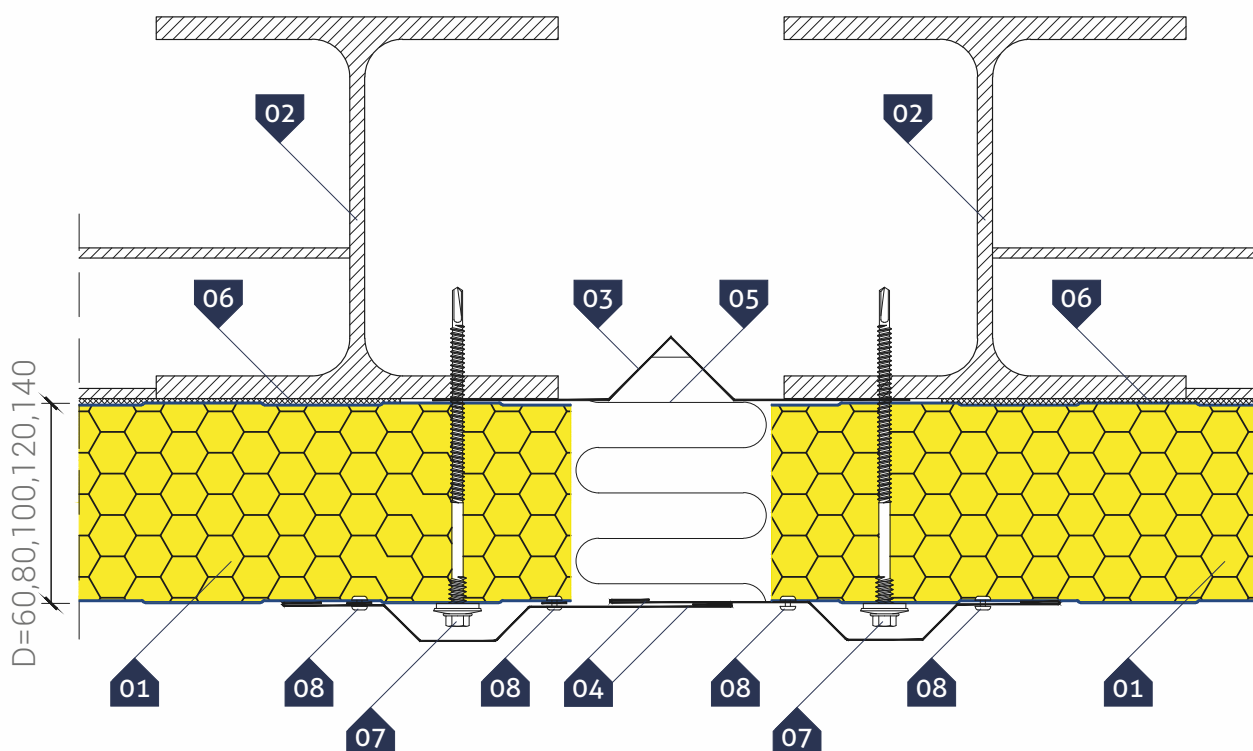
- ▷ VERTICAL ARRANGEMENT of panels
Detail of panel connection to blockwall



KEY:

- 01. GS insPIRe® U wall panel
- 02. Blockwall and transom acc. to structure design
- 03. Covering flashing **OB-19**
- 04. Inner corner flashing **OB-07**
- 05. Polyethylene, self-adhesive sealing tape (**PES**)*
- 06. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item



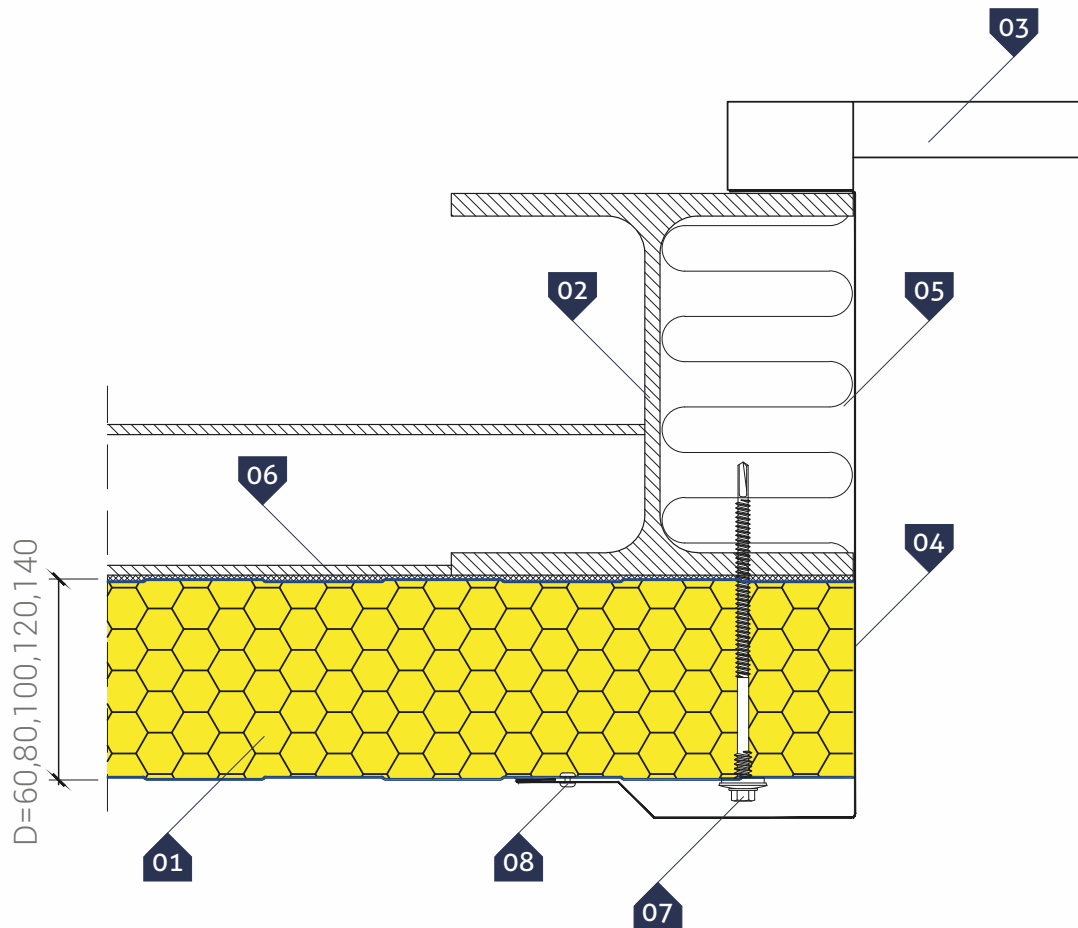
▷ **KEY:**

- 01. **GS insPIRe® U wall panel**
- 02. Steel posts and transom acc. to structure design
- 03. Individual expansion joint flashing
- 04. Covering flashing **OB-17**
- 05. Thermal insulation on the fastening
- 06. Polyethylene, self-adhesive sealing tape (**PES**)*
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

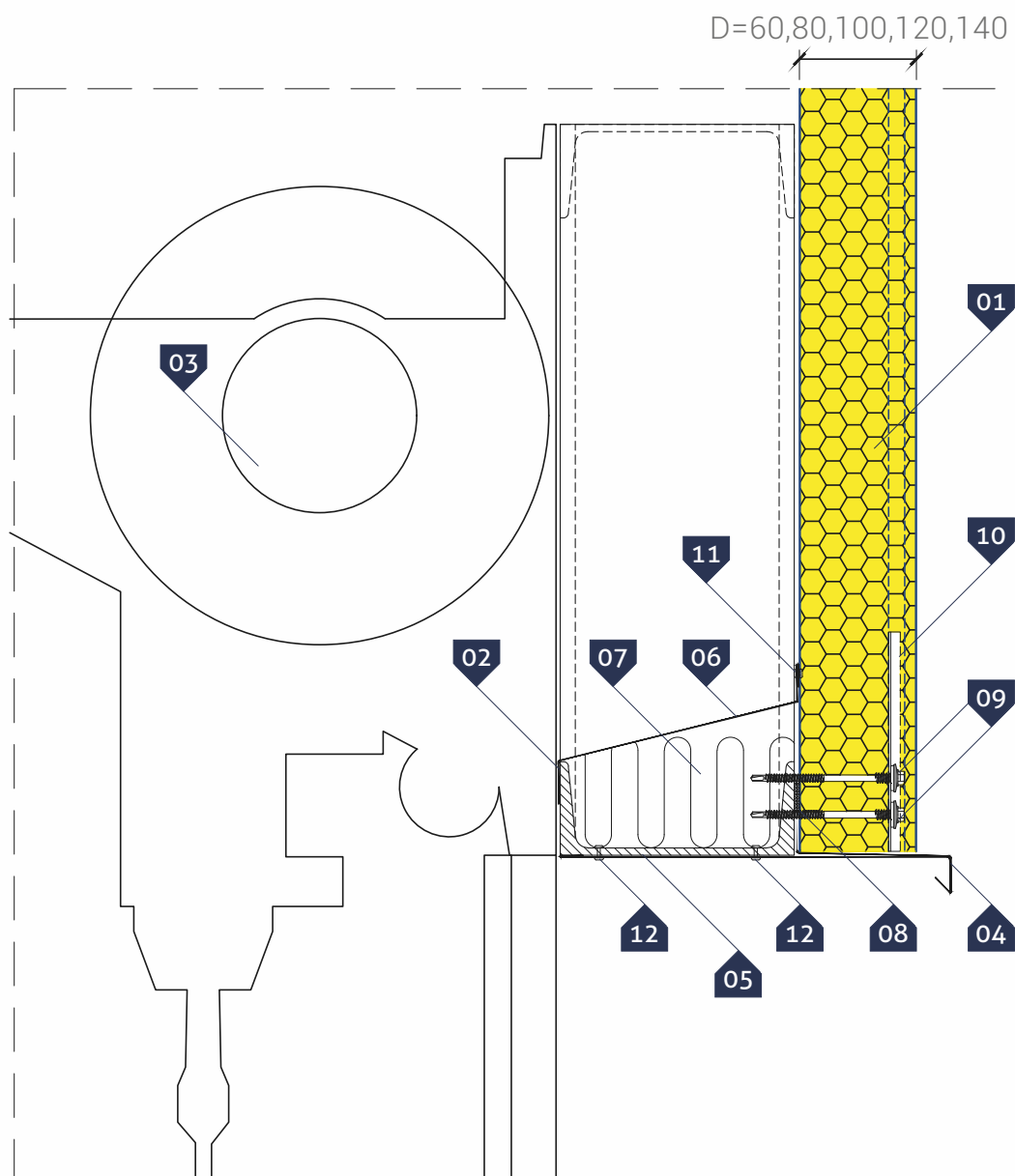
- ▷ VERTICAL ARRANGEMENT of panels
Detail of steel post in a roller shutter door



▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. Steel post and transom acc. to structure design
- 03. Industrial door
- 04. Door flashing **OB-21**
- 05. Thermal insulation on the fastening
- 06. Polyethylene, self-adhesive sealing tape (**PES**)*
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item



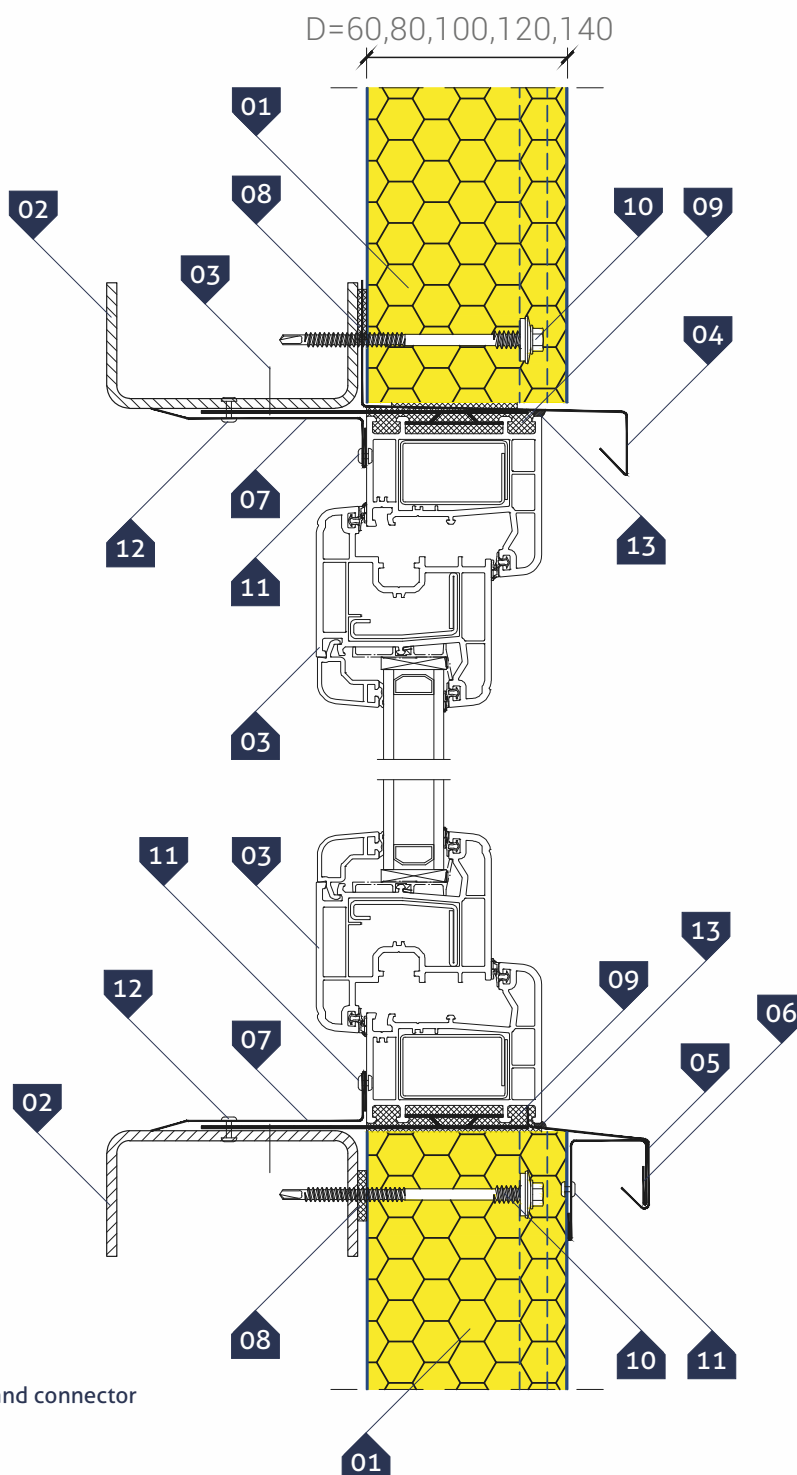
▷ **KEY:**

- 01. **GS insPIRe® U wall panel**
- 02. Transom acc. to structure design
- 03. Roller shutter door
- 04. Drip edge **OB-13**
- 05. Covering flashing **OB-20**
- 06. Individual covering flashing
- 07. Thermal insulation on the fastening
- 08. Polyethylene, self-adhesive sealing tape (**PES**)*
- 09. Self-drilling connector for sandwich panels
- 10. **PM1** spacer
- 11. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**
- 12. Blind rivet **4,8 x 15,1** (for the structure)

* - a recommended item

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

- ▷ VERTICAL ARRANGEMENT of panels
- Detail of window mounting in a sandwich panel
- Type I – vertical section



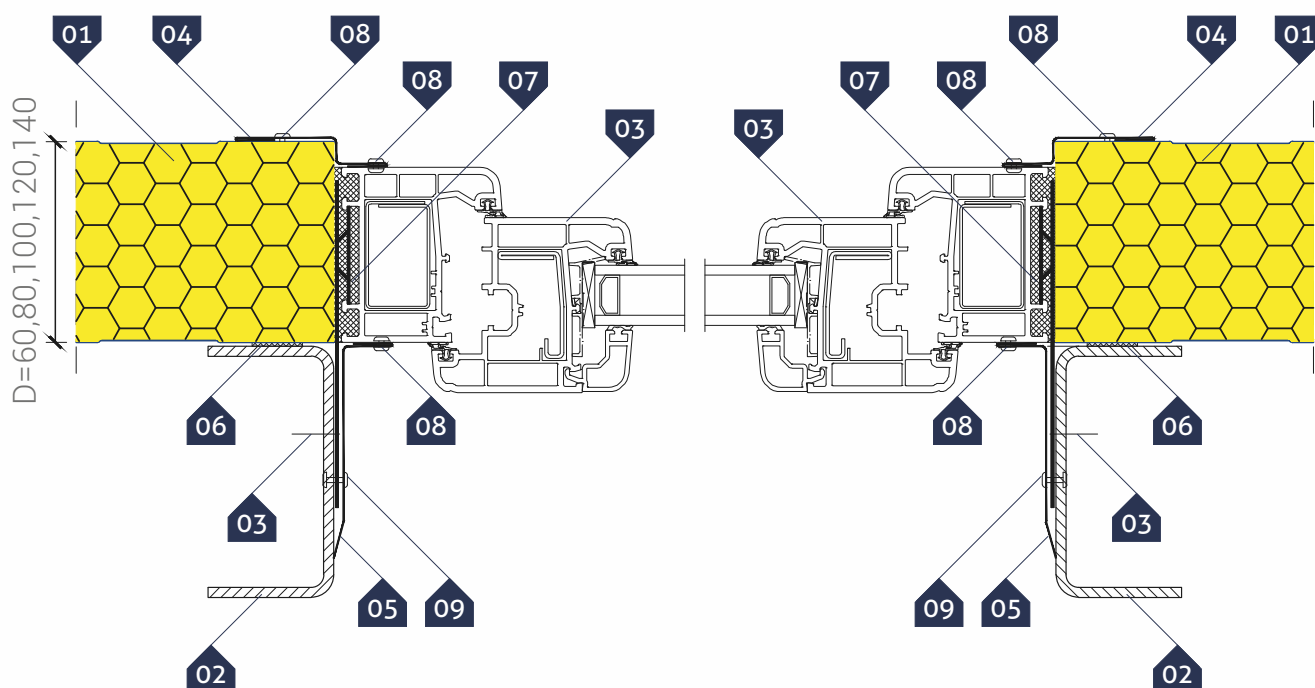
▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. Transom acc. to structure design
- 03. PCV or aluminium window with a holder and connector
- 04. Drip edge OB-13
- 05. Cill OB-37
- 06. Stiffening flashing OB-16
- 07. Individual internal corner
- 08. Polyethylene, self-adhesive sealing tape (PES)*
- 09. Polyurethane caulking foam
- 10. Self-drilling connector for sandwich panels
- 11. Self-drilling connector for steel sheets or rivet 4.0 x 8.0
- 12. Blind rivet 4,8 x 15,1 (for the structure)
- 13. Neutral silicone sealant

* - a recommended item

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

- ▷ VERTICAL ARRANGEMENT of panels
- Detail of window mounting in a sandwich panel
- Type I – horizontal section



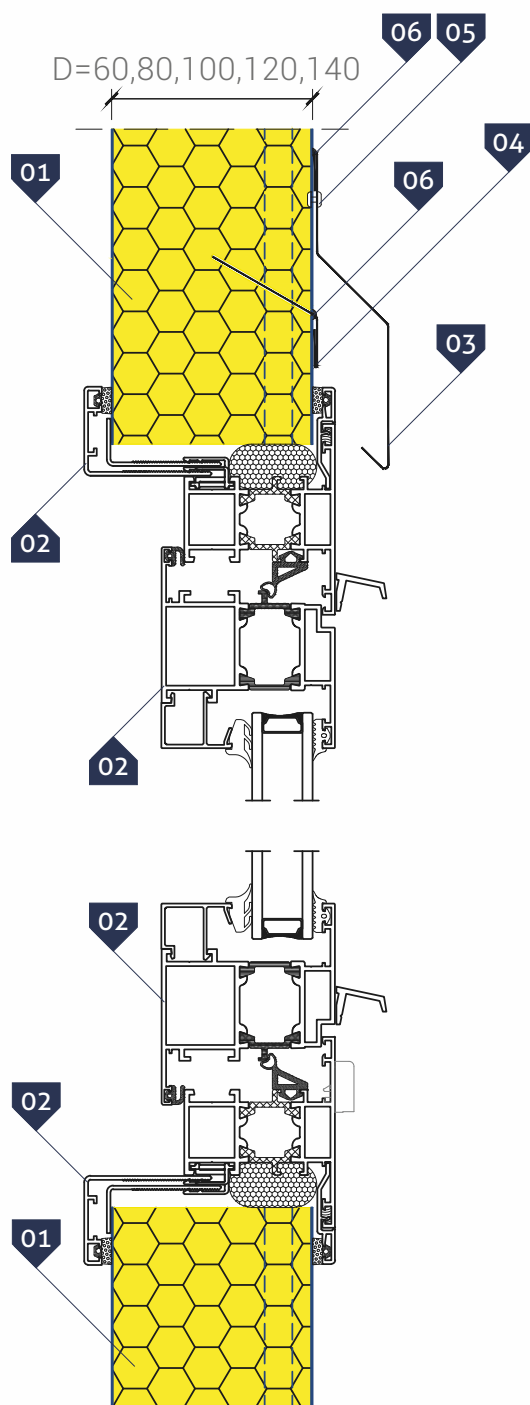
▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. Transom acc. to structure design
- 03. PCV or aluminium window with a holder and connector
- 04. Individual covering flashing
- 05. Individual internal corner
- 06. Polyethylene, self-adhesive sealing tape (PES)*
- 07. Polyurethane caulking foam
- 08. Self-drilling connector for steel sheets or rivet 4.0 x 8.0
- 09. Blind rivet 4,8 x 15,1 (for the structure)

* - a recommended item

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

- ▷ VERTICAL ARRANGEMENT of panels
Detail of window mounting in a sandwich panel
Type II – vertical section

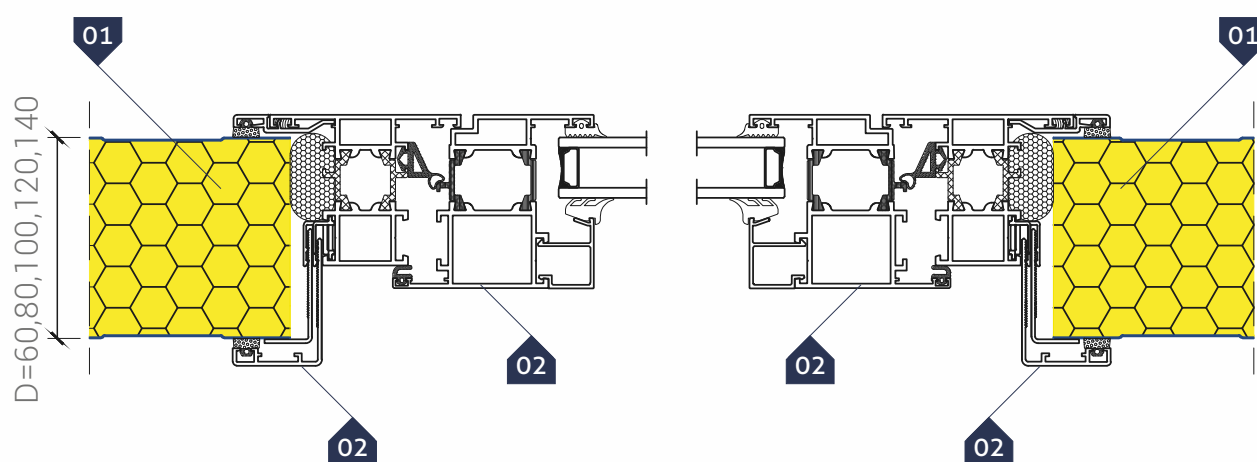


▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. PCV or aluminium window with a fastening profile
- 03. Drip edge **OB-11** (option)
- 04. Additional flashing on panels' junction
- 05. Self-drilling connector for steel sheets or rivet **4.0 X 8.0**
- 06. Neutral silicone sealant

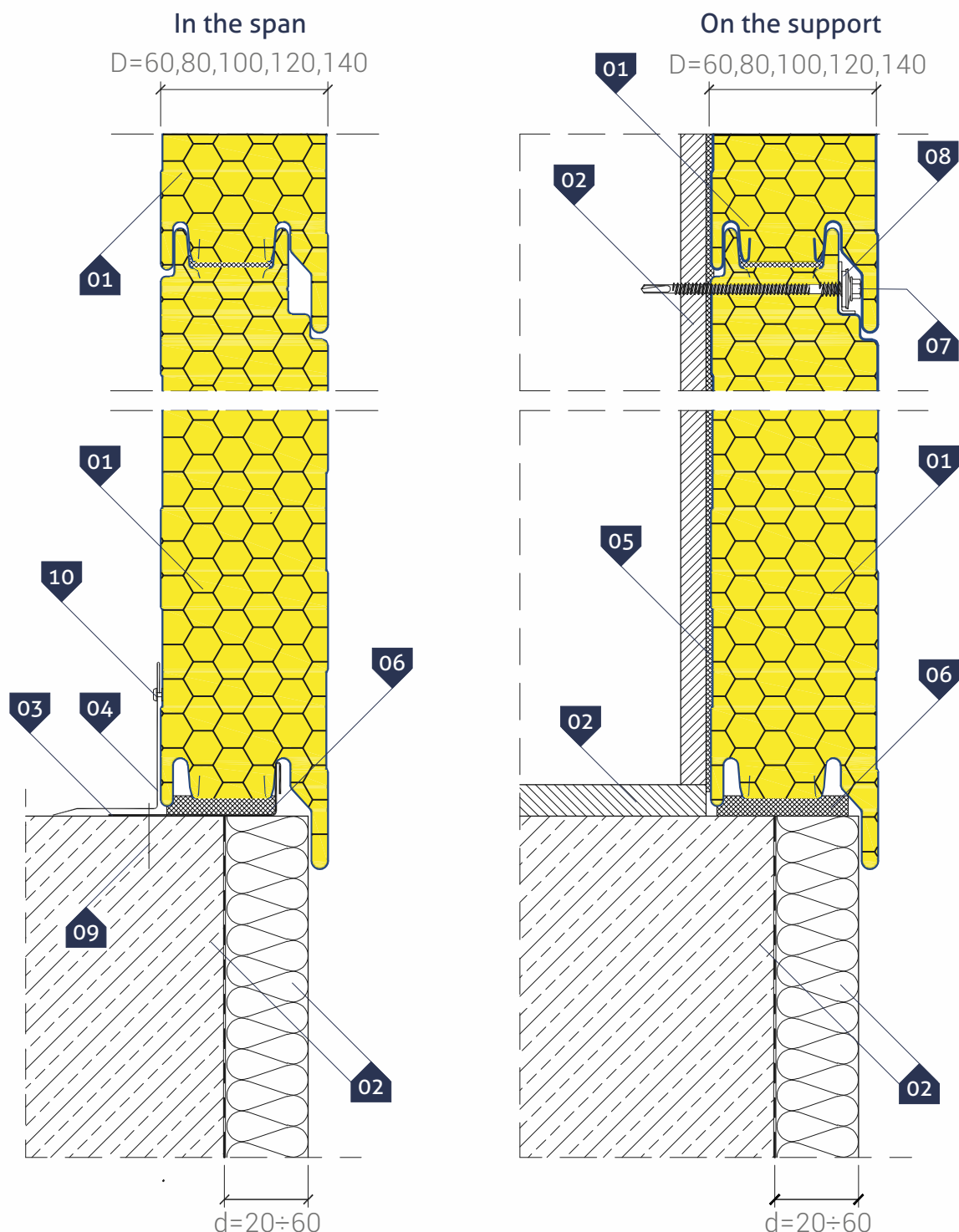
GS insPIRe® U wall sandwich panel (Hidden cam-lock)

- ▷ VERTICAL ARRANGEMENT of panels
- Detail of window mounting in a sandwich panel
- Type II – horizontal section



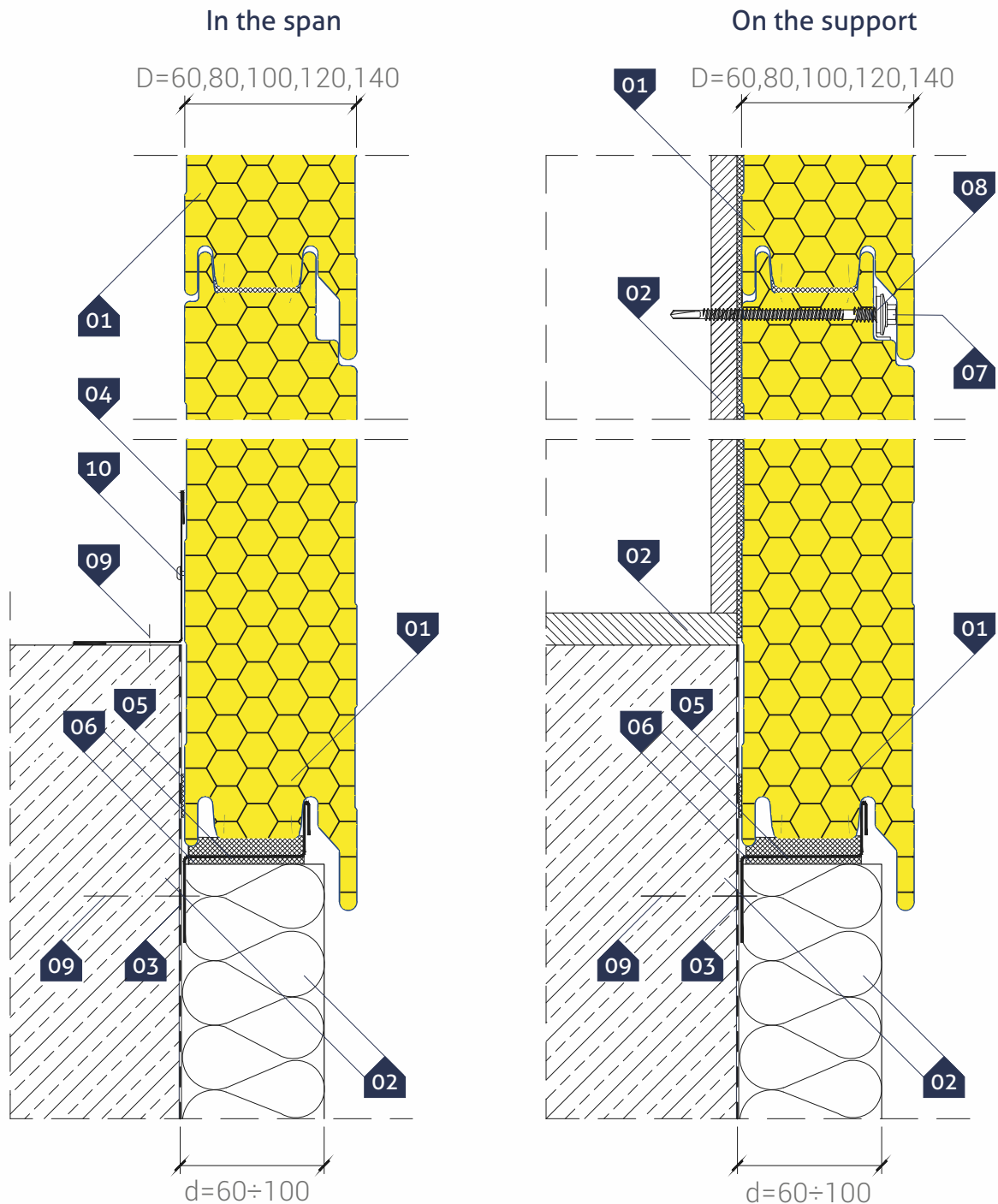
▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. PCV or aluminium window with a fastening profile



▷ KEY:

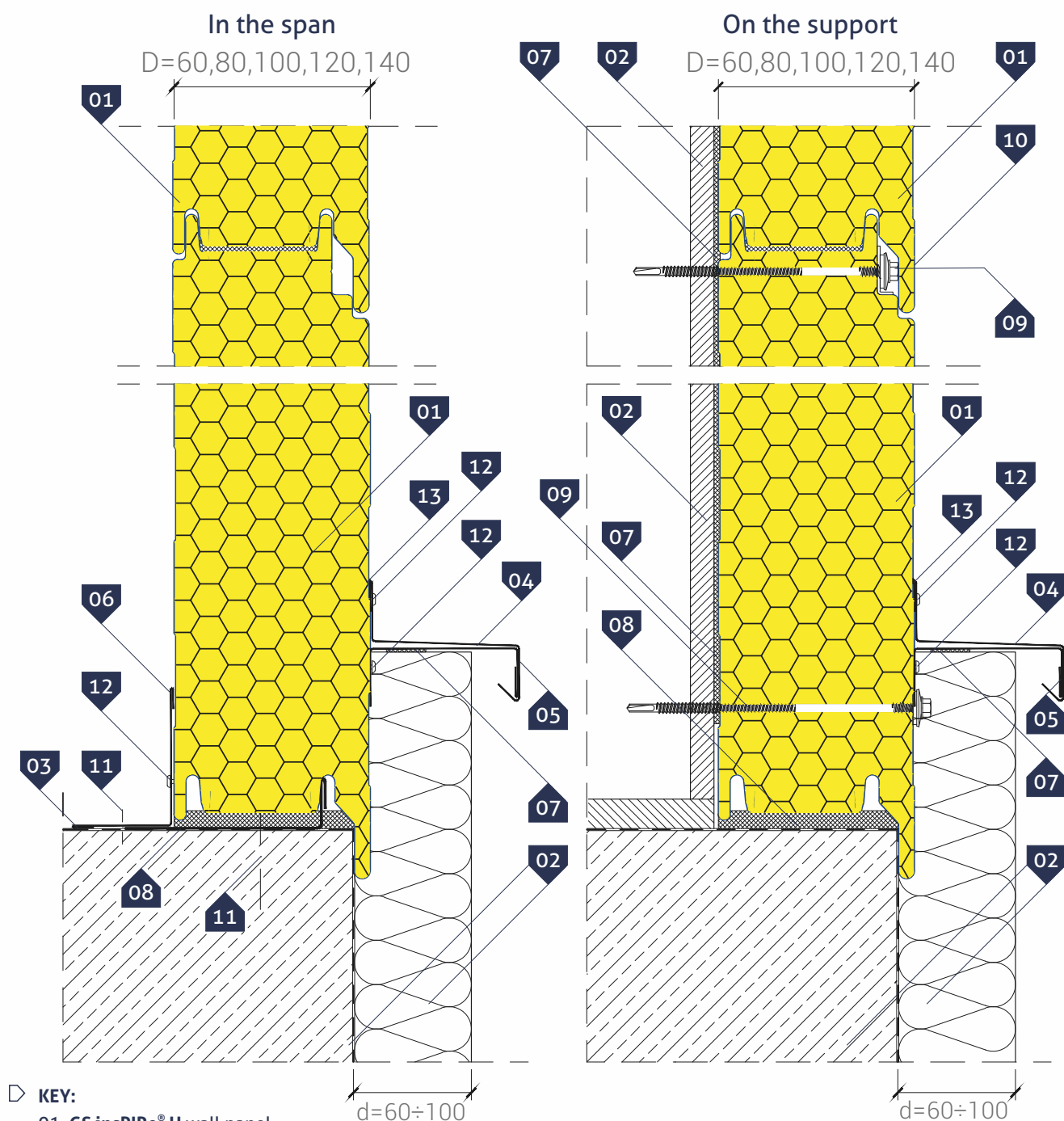
- 01. GS insPIRe® U wall panel
 - 02. Structural elements acc. to detailed design and thermal insulation carried out after assembly of panel
 - 03. Starting angle **OB-41**
 - 04. Inner corner flashing **OB-07**
 - 05. Polyethylene, self-adhesive sealing tape (**PES**)*
 - 06. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
 - 07. Self-drilling connector for sandwich panels
 - 08. **PM1** spacer
 - 09. Steel expansion joint for quick assembly
 - 10. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**
- * - a recommended item



▷ **KEY:**

- 01. GS insPIRe® U wall panel
- 02. Structural elements acc. to detailed design and thermal insulation carried out after assembly of panel
- 03. Edge Z-bar OB-39
- 04. Inner corner flashing OB-06
- 05. Polyethylene, self-adhesive sealing tape (PES)*
- 06. Impregnated polyurethane seal (PURS) or polyurethane caulking foam
- 07. Self-drilling connector for sandwich panels
- 08. PM1 spacer
- 09. Steel expansion joint for quick assembly
- 10. Self-drilling connector for steel sheets or rivet 4.0 X 8.0

* - a recommended item

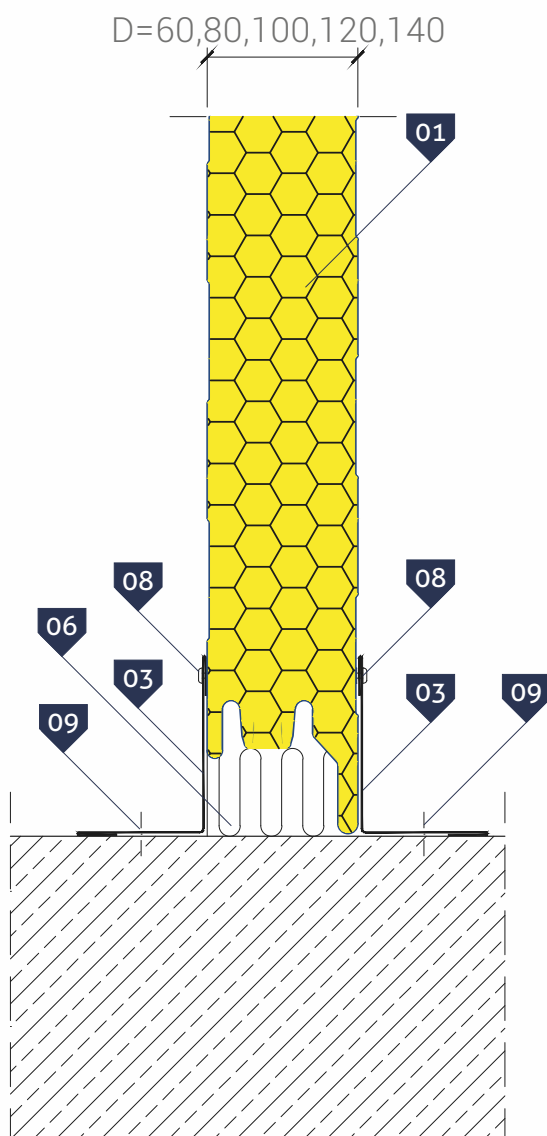


▷ KEY:

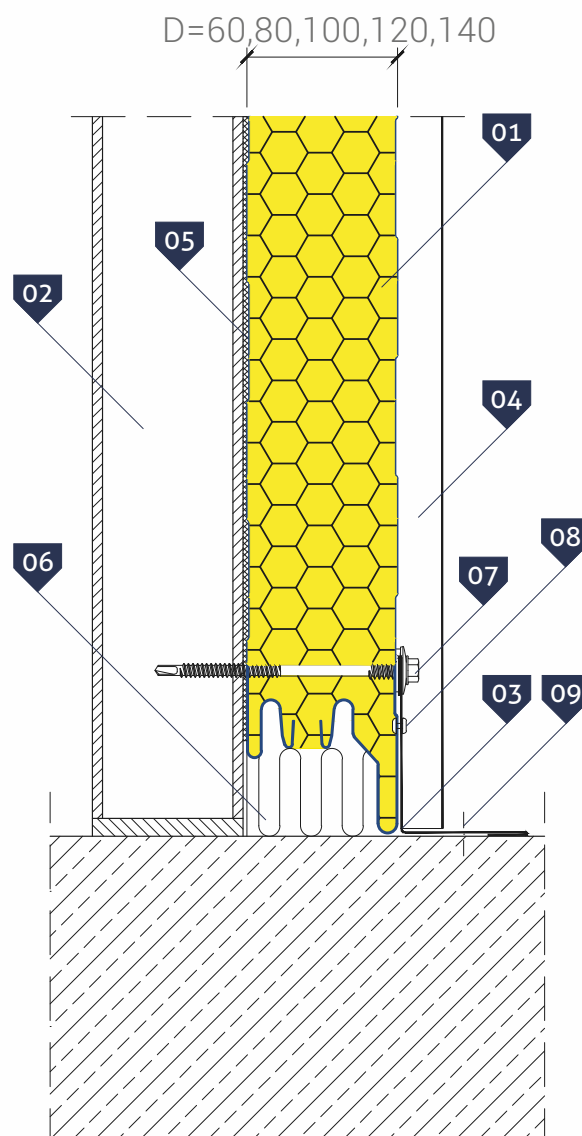
- 01. GS insPIRe® U wall panel
- 02. Structural elements acc. to detailed design and thermal insulation carried out after assembly of panel
- 03. Starting angle OB-41
- 04. Drip edge OB-15
- 05. Rigid flashing OB-15a
- 06. Inner corner flashing OB-06
- 07. Polyethylene, self-adhesive sealing tape (PES)*
- 08. Polyurethane caulking foam
- 09. Self-drilling connector for sandwich panels
- 10. PM1 spacer
- 11. Steel expansion joint for quick assembly
- 12. Self-drilling connector for steel sheets or rivet 4.0 x 8.0
- 13. Neutral silicone sealant

* - a recommended item

In the span



On the support



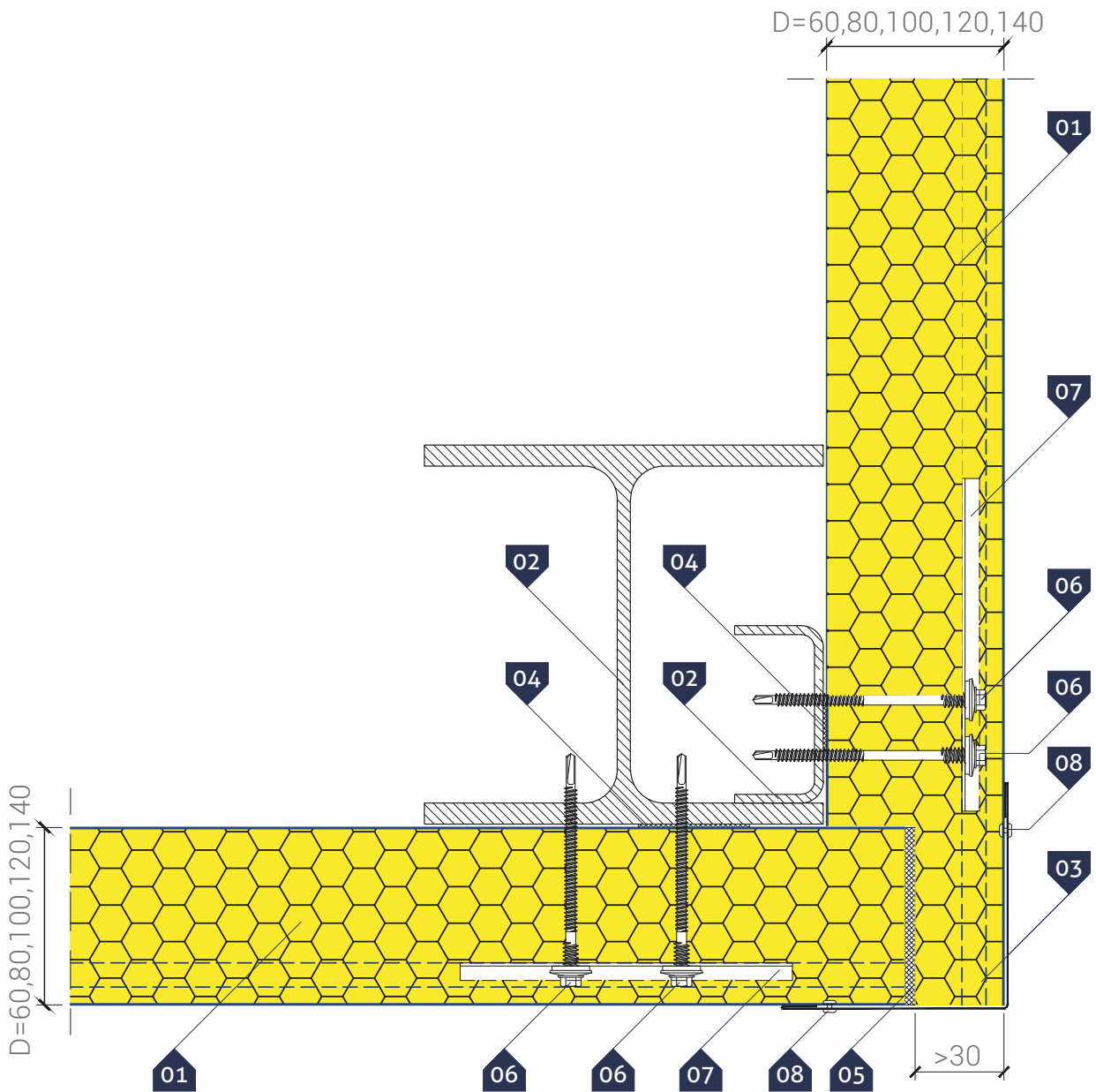
▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. Steel post acc. to structure design
- 03. Inner corner flashing **OB-06**
- 04. Covering flashing for panel junction
- 05. Polyethylene, self-adhesive sealing tape (**PES**)*
- 06. Thermal insulation carried out on the fastening
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets or rivet **4.0 X 8.0**
- 09. Steel expansion joint for quick assembly

* - a recommended item

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

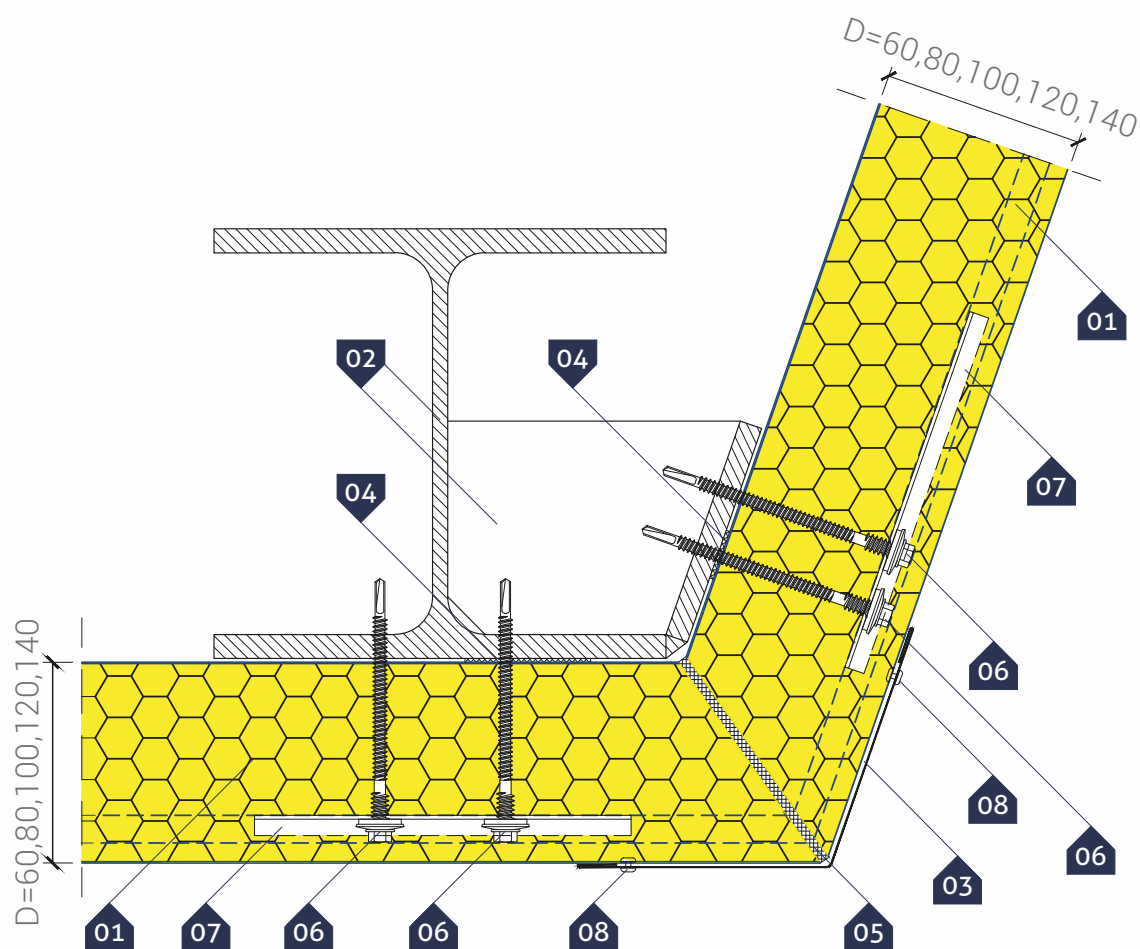
- ▷ HORIZONTAL ARRANGEMENT of panels
- Detail of panel connection in a corner



▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. Steel post acc. to structure design
- 03. External corner flashing **OB-01**
- 04. Polyethylene, self-adhesive sealing tape (**PES**)*
- 05. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 06. Self-drilling connector for sandwich panels
- 07. **PM1** spacer
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item



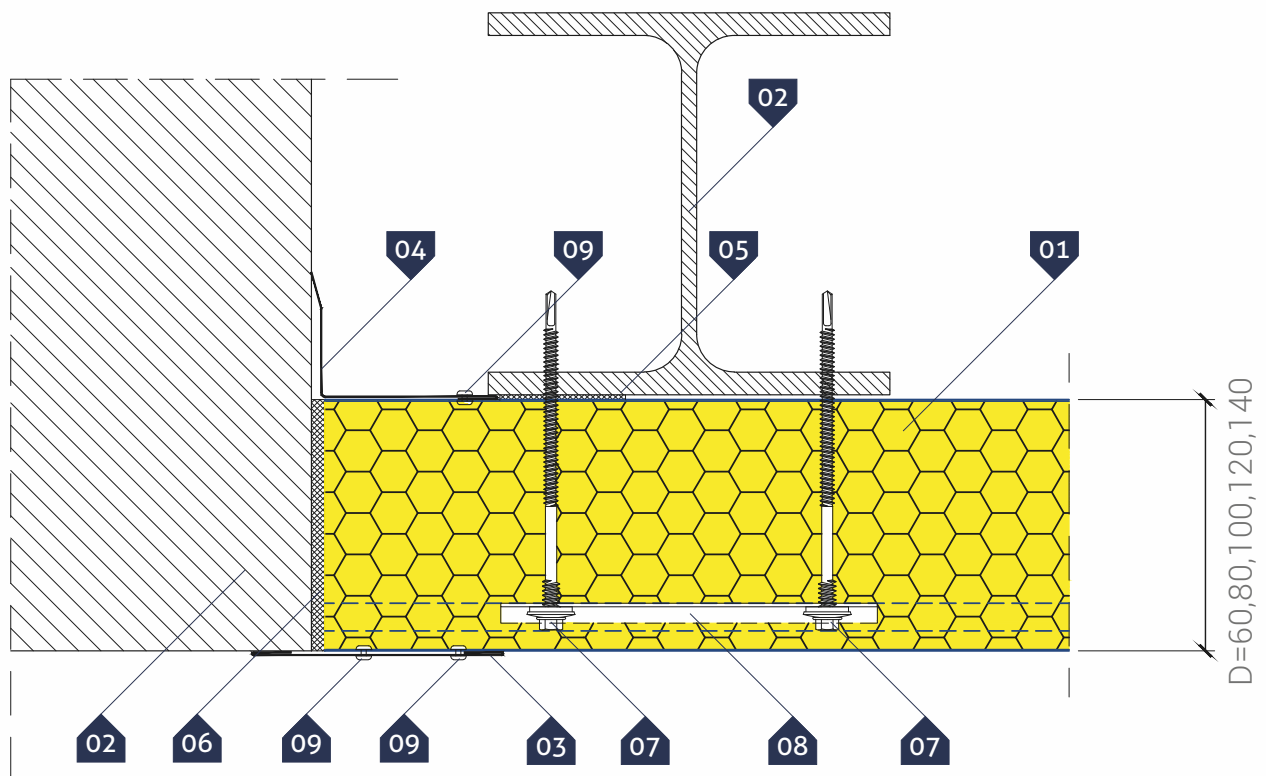
▷ **KEY:**

- 01. GS insPIRe® U wall panel
- 02. Steel post acc. to structure design
- 03. External corner flashing **OB-01**
- 04. Polyethylene, self-adhesive sealing tape (**PES**)*
- 05. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 06. Self-drilling connector for sandwich panels
- 07. **PM1** spacer
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

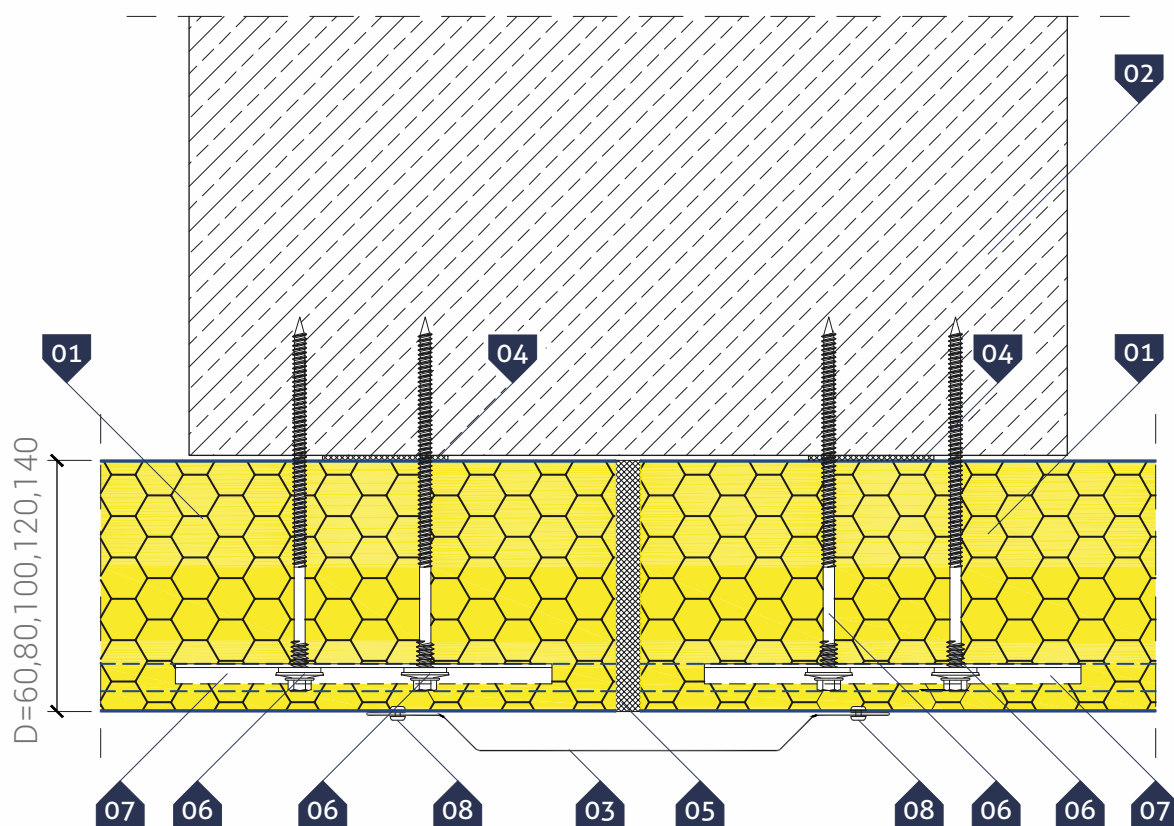
- ▷ HORIZONTAL ARRANGEMENT of panels
Detail of panel connection to blockwall



▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. Blockwall and post acc. to structure design
- 03. Masking treatment **OB-18**
- 04. Inner corner flashing **OB-07**
- 05. Polyethylene, self-adhesive sealing tape (**PES**)*
- 06. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 07. Self-drilling connector for sandwich panels
- 08. **PM1** spacer
- 09. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item



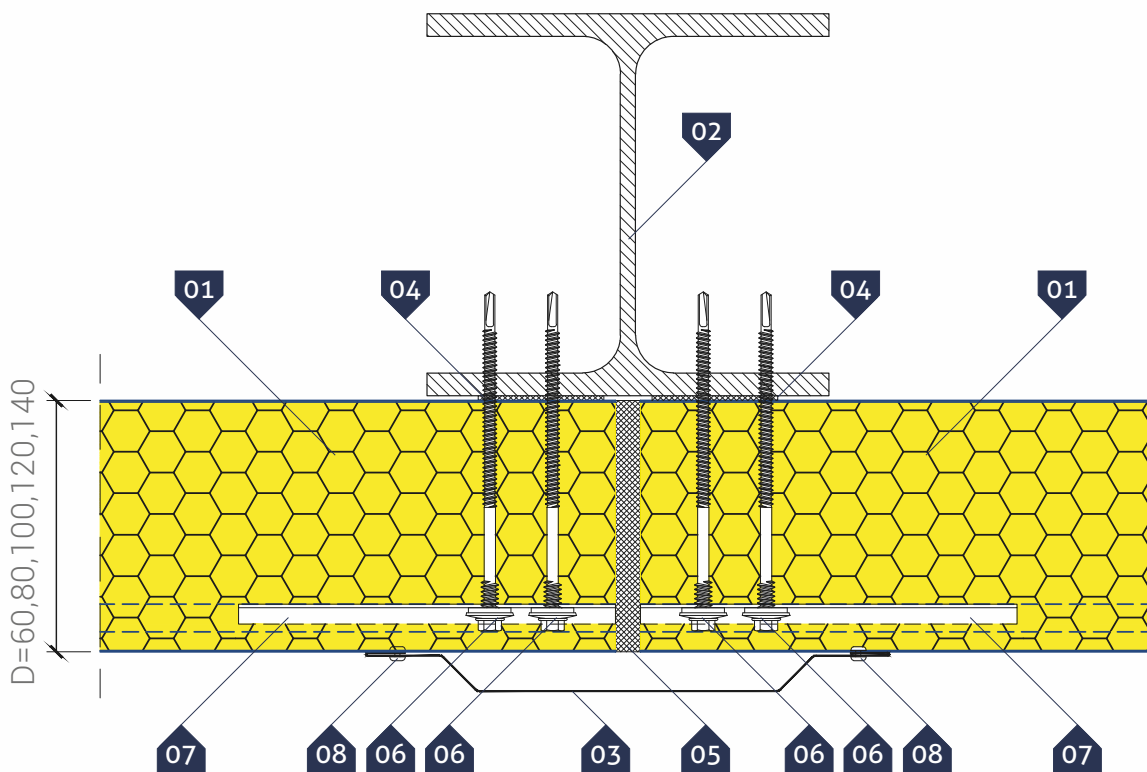
▷ **KEY:**

- 01. **GS insPIRe® U wall panel**
- 02. Reinforced concrete post acc. to structure design
- 03. Covering flashing **OB-17**
- 04. Polyethylene, self-adhesive sealing tape (**PES**)*
- 05. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 06. Self-drilling fastener for fixing sandwich panels
- 07. **PM1** spacer
- 08. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**

* - a recommended item

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

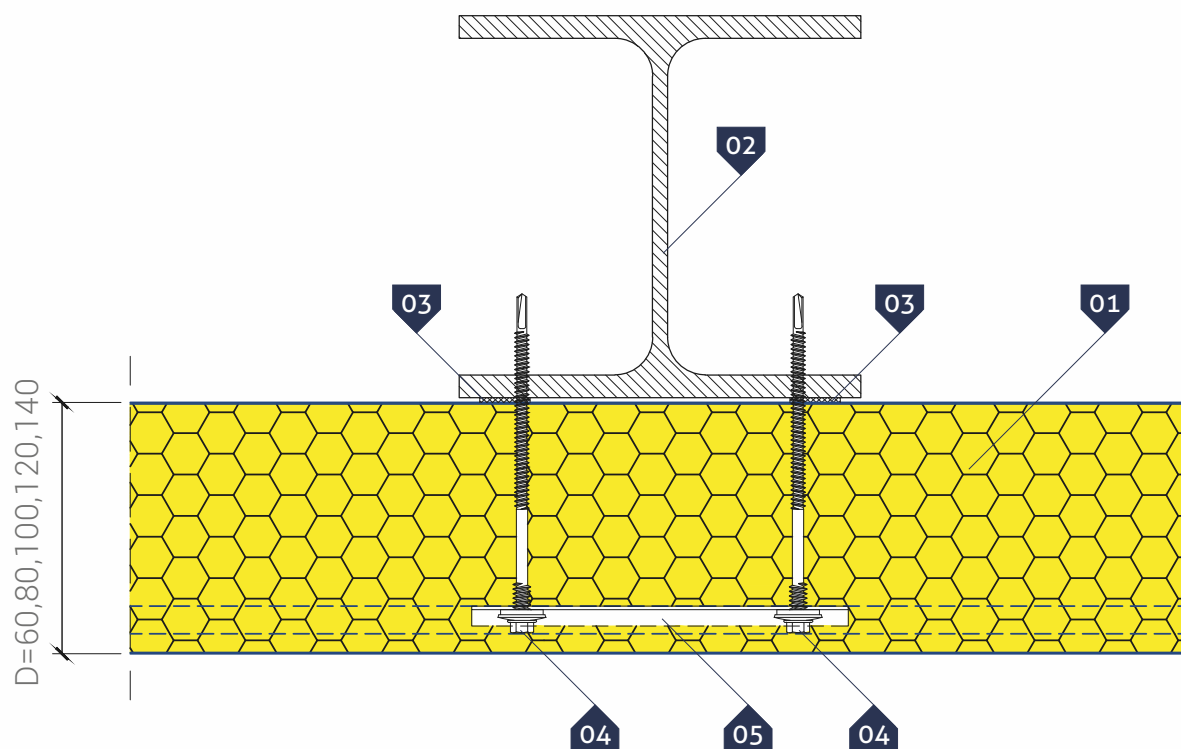
- ▷ HORIZONTAL ARRANGEMENT of panels
- Detail of panel connection to main support



▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. Steel column according to structure design
- 03. Covering flashing **OB-17**
- 04. Polyethylene, self-adhesive sealing tape (**PES**)*
- 05. Impregnated polyurethane seal (**PURS**) or polyurethane caulking foam
- 06. Self-drilling connector for sandwich panels
- 07. **PM1** spacer
- 08. Self-drilling connector for steel sheets or rivet **4.0 X 8.0**

* - a recommended item



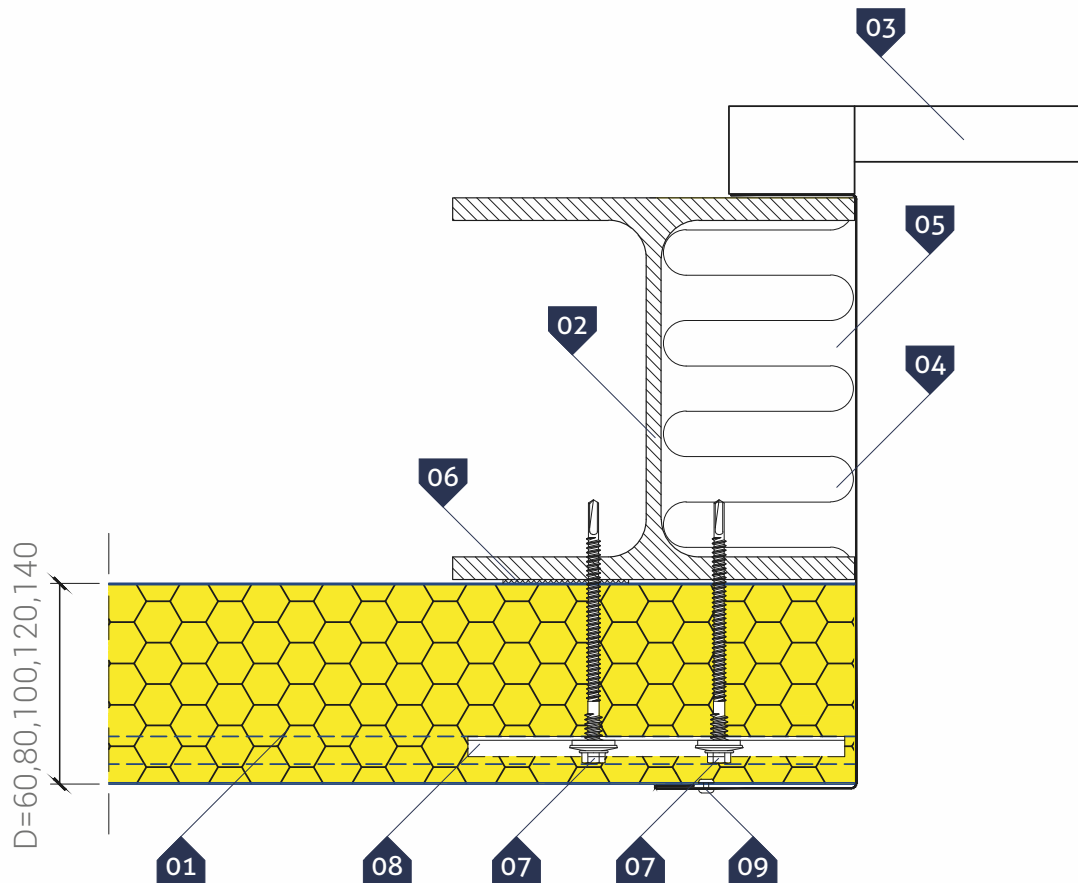
▷ **KEY:**

- 01. **GS insPIRe® U** wall panel
- 02. Steel column according to structure design
- 03. Polyethylene, self-adhesive sealing tape (**PES**)*
- 04. Self-drilling connector for sandwich panels
- 05. **PM1** spacer

* - a recommended item

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

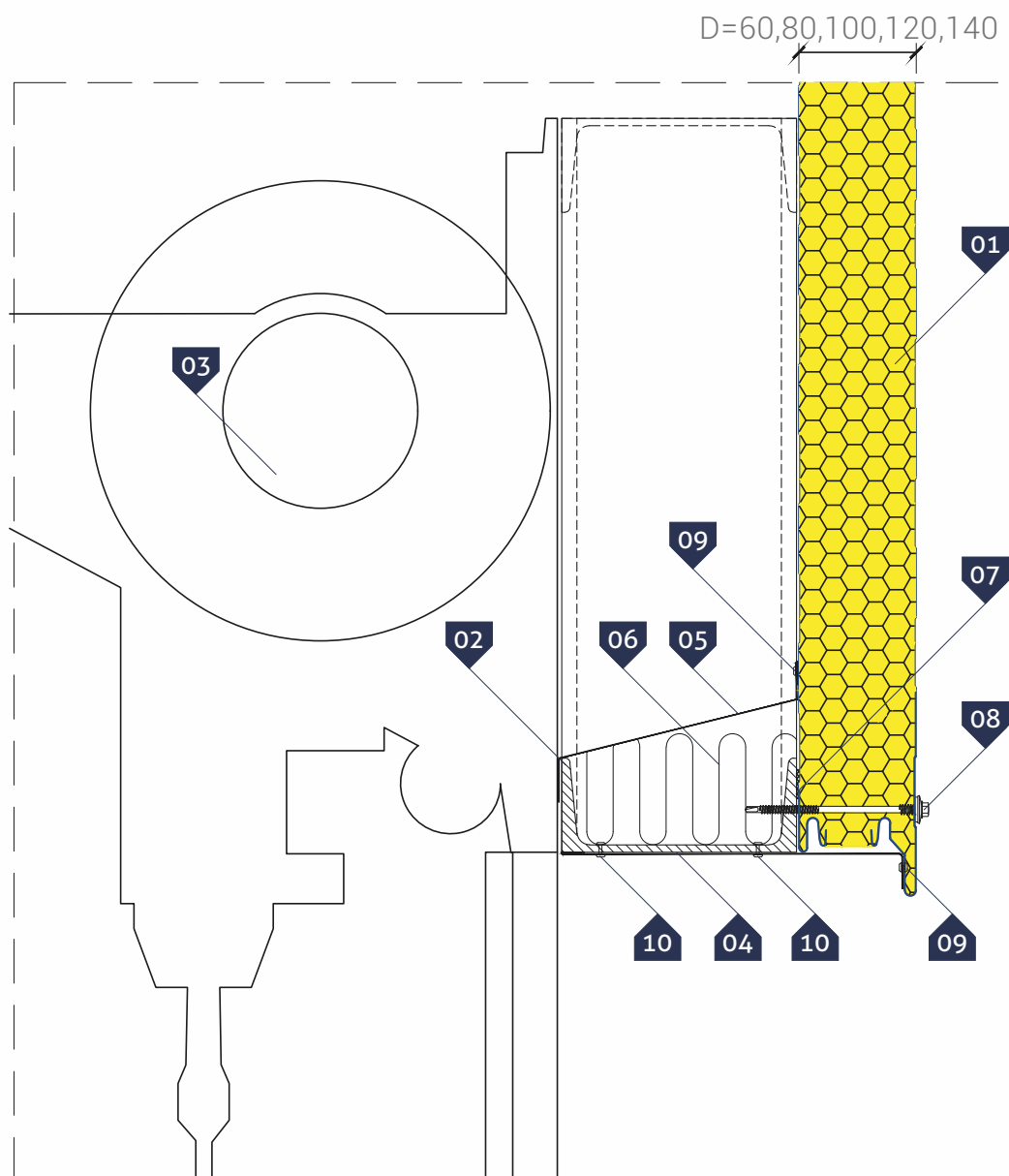
- ▷ HORIZONTAL ARRANGEMENT of panels
- Detail of post to roller shutter door



▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. Steel post acc. to structure design
- 03. Roller shutter door
- 04. Individual door flashing
- 05. Thermal insulation on the fastening
- 06. Polyethylene, self-adhesive sealing tape (PES)*
- 07. Self-drilling connector for sandwich panels
- 08. PM1 spacer
- 09. Self-drilling connector for steel sheets or rivet 4.0 X 8.0

* - a recommended item



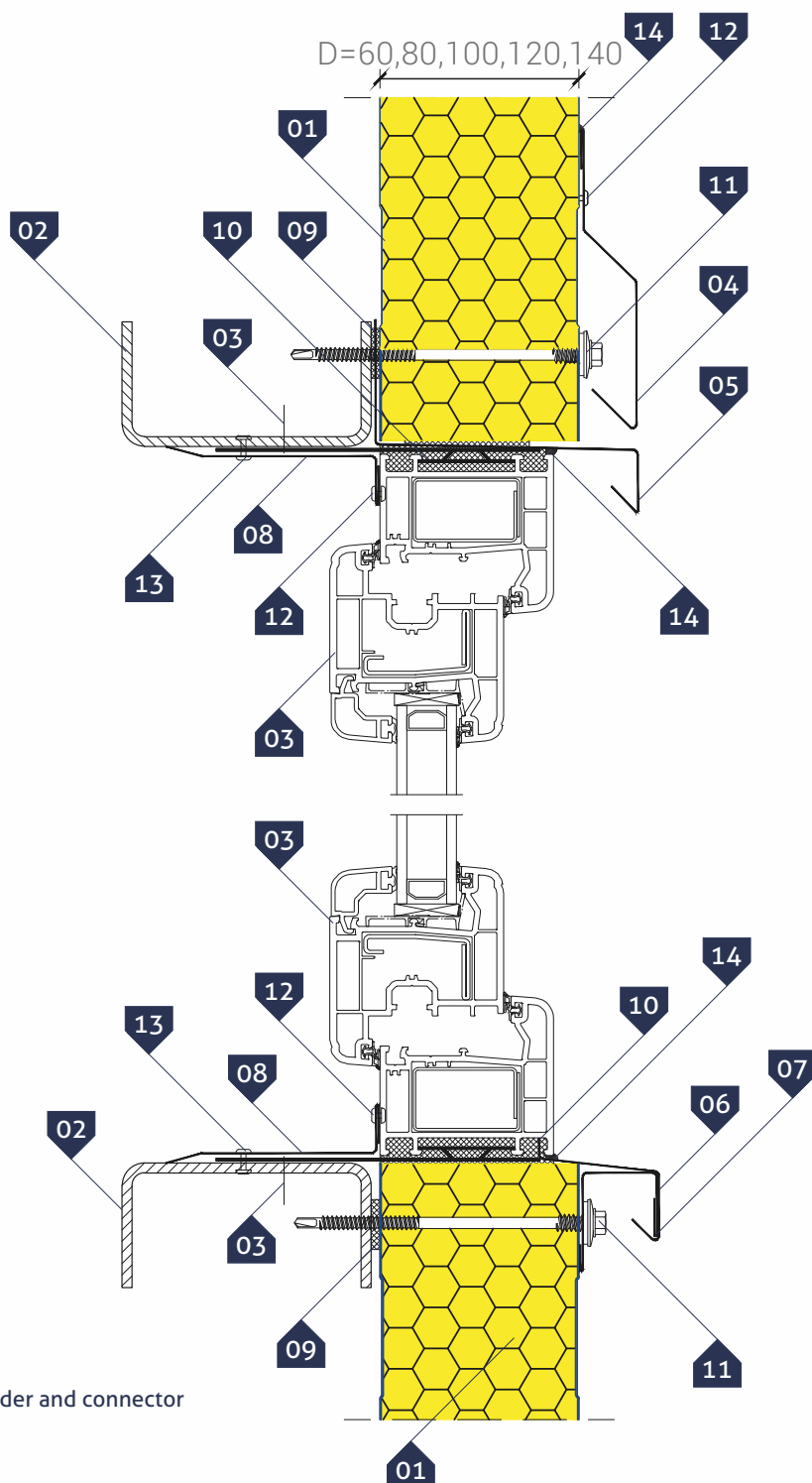
▷ **KEY:**

- 01. GS insPIRe® U wall panel
- 02. Transom acc. to structure design
- 03. Roller shutter door
- 04. Individual covering flashing
- 05. Individual covering flashing
- 06. Thermal insulation on the fastening
- 07. Polyethylene, self-adhesive sealing tape (PES)*
- 08. Self-drilling connector for sandwich panels
- 09. Rivet 4,0 x 8,0
- 10. Blind rivet 4,8 x 15,1 (for the structure)

* - a recommended item

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

- ▷ HORIZONTAL ARRANGEMENT of panels
- Detail of window mounting in a sandwich panel
- Type I – verticle section



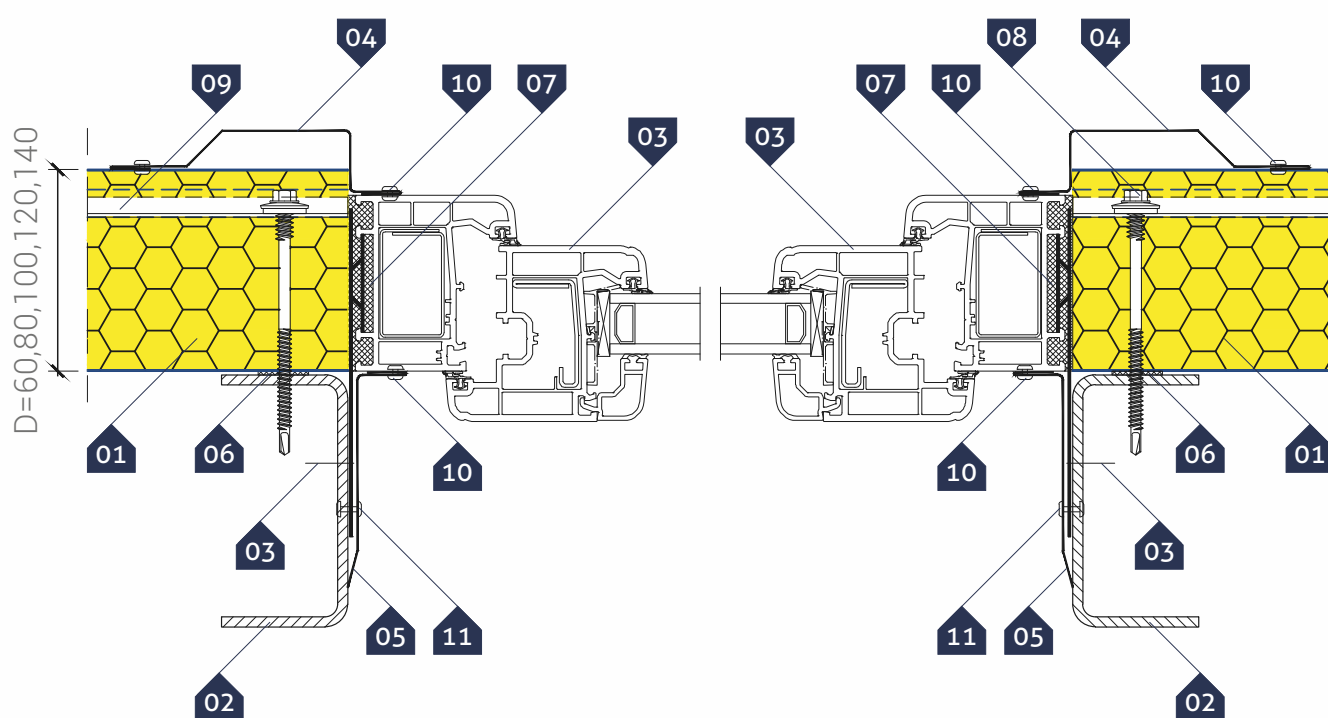
▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. Transom acc. to structure design
- 03. PCV or aluminium window with a holder and connector
- 04. Drip edge OB-10
- 05. Drip edge OB-13
- 06. Cill OB-37
- 07. Rigid flashing OB-16
- 08. Individual internal corner
- 09. Polyethylene, self-adhesive sealing tape (PES)*
- 10. Polyurethane caulking foam
- 11. Self-drilling connector for sandwich panels
- 12. Self-drilling connector for steel sheets or rivet 4.0 x 8.0
- 13. Blind rivet 4,8 x 15,1 (for the structure)
- 14. Neutral silicone sealant

* - a recommended item

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

- ▷ HORIZONTAL ARRANGEMENT of panels
- Detail of window mounting in a sandwich panel
- Type I - horizontal section



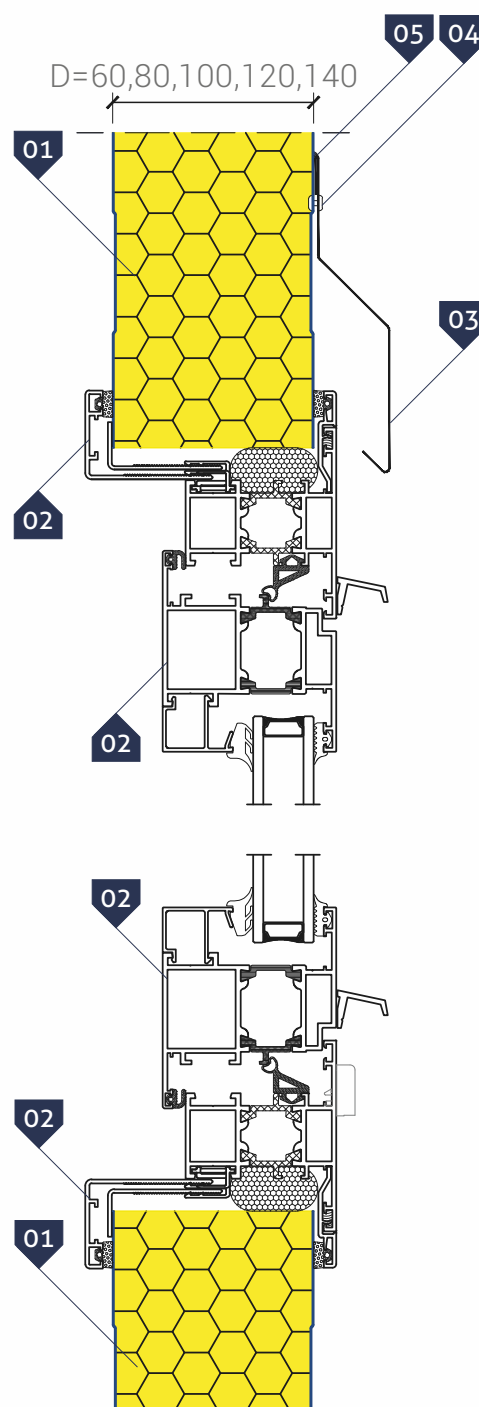
▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. Transom acc. to structure design
- 03. PCV or aluminium window with a holder and connector
- 04. Individual covering flashing
- 05. Individual internal corner
- 06. Polyethylene, self-adhesive sealing tape (PES)*
- 07. Polyurethane caulking foam
- 08. Self-drilling connector for sandwich panels
- 09. PM1 spacer
- 10. Self-drilling connector for steel sheets or rivet 4.0 x 8.0
- 11. Blind rivet 4,8 x 15,1 (for the structure)

* - a recommended item

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

- ▷ HORIZONTAL ARRANGEMENT of panels
- Detail of window mounting in a sandwich panel
Type II – verticle section

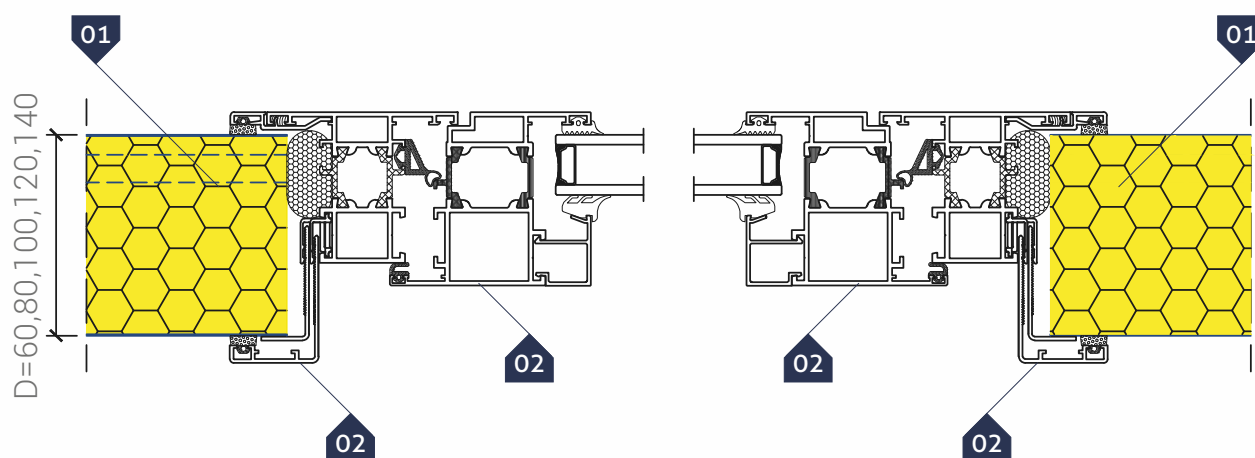


▷ KEY:

- 01. GS insPIRe® U wall panel
- 02. PVC or aluminium window with a fastening profile
- 03. Drip edge **OB-11** (option)
- 04. Self-drilling connector for steel sheets or rivet **4.0 x 8.0**
- 05. Neutral silicone sealant

GS insPIRe® U wall sandwich panel (Hidden cam-lock)

- ▷ HORIZONTAL ARRANGEMENT of panels
Detail of window mounting in a sandwich panel
Type II – horizontal section



▷ **KEY:**

01. GS insPIRe® U wall panel
02. PVC or aluminium window with a fastening profile

▷ **GS insPIRe® U wall sandwich panel bent**

Facing the expectations of customers, Gór Stal company introduced to its offer corner wall panels **GS insPIRe® U bent**, the use of which allows to avoid flashing in the vertical corners of the concave and convex buildings, as a result of which it is possible to maintain the homogeneity of the housing in those places. In order to facilitate works on the site, **bent-type** panels are assembled in the same way as flat panels, i.e. with PM-1 washers, self-drilling screws, and between panels and the structure PES tape is recommended.

In addition, the use of the **bent-type** panel allows to limit the linear thermal bridge occurring at junction of panels in the corner when using flat panels.

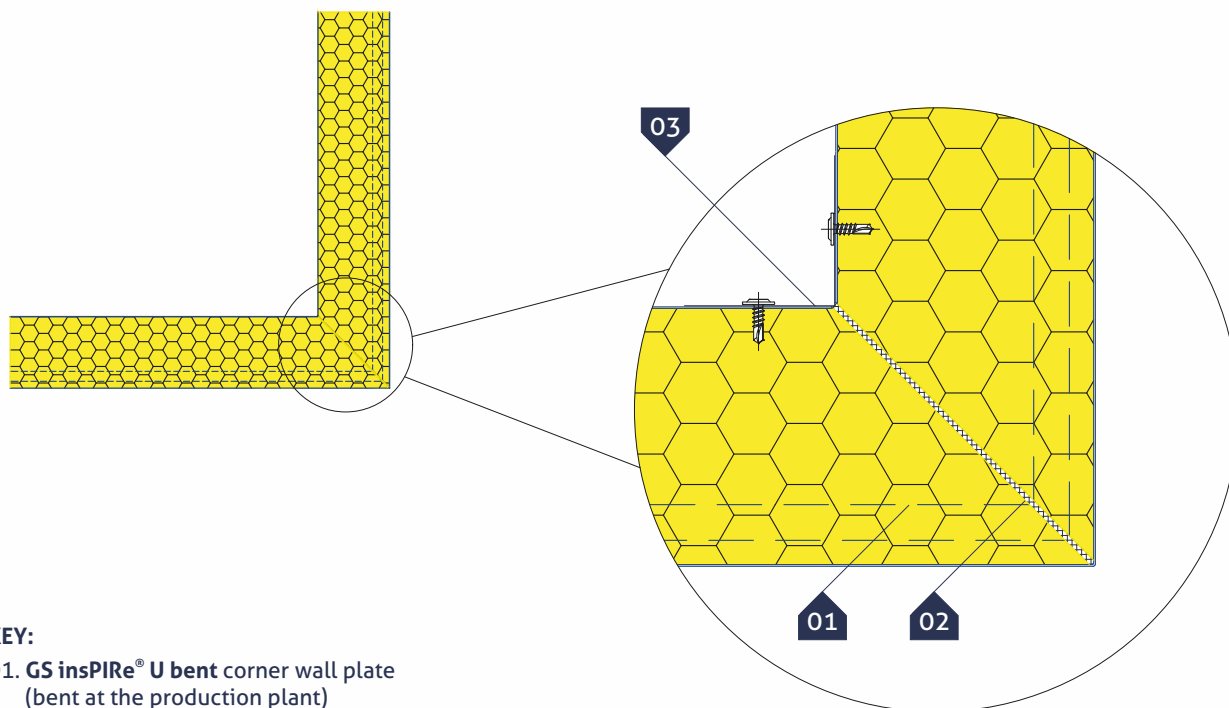
General remarks:

- ▷ range of available thicknesses from 60 to 120 mm,
- ▷ minimal bending equal to the panel thickness,
- ▷ sum of dimensions up to 4.0 m,
- ▷ there is a possibility of bending the outer metal sheet towards the face of the panel, which will cause its masking.

Possible shapes along with the boundary dimensions of the panes are illustrated in the figure on the next page.



Bending detail

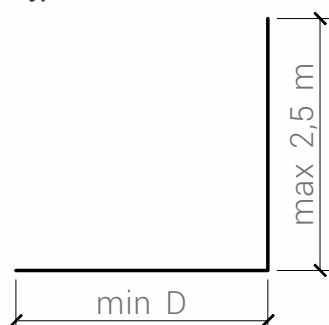


▷ KEY:

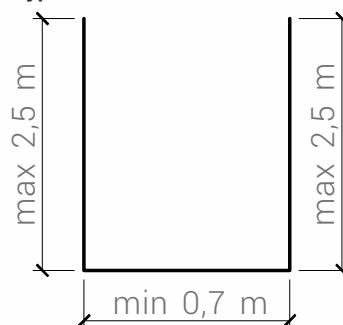
- 01. **GS insPIRe® U bent corner wall plate**
(bent at the production plant)
- 02. Polyurethane mounting foam
- 03. Structural flashing
(possible disassembly with extreme caution)

Corner panels production capacity

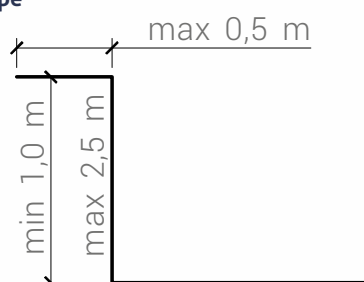
01 L type



02 U type



03 Z type



04 unusual custom

* according to an individual design
by prior arrangement

APPLICATION

GS PIR D roof panel is designed for roof covers. They are characterized by a very deep re-profiling of the trapezoidal outer cladding. This is related to the transfer of long-lasting service loads. The panels are fastened with screws to a wooden, steel or reinforced concrete structure. Minimum inclination of the roof slopes is **3° (5.2%)** without skylights and **5° (8.7%)** for coverings made of plates joined lengthwise.

PHYSICAL PROPERTIES

GS PIR D roof panel is produced in six core thicknesses: **40/80, 60/100, 80/120, 100/140, 120/160, 150/190 and 160/200 mm**. The panel cladding is made of steel sheet galvanized on both sides according to **EN 10346** with an organic polyester lacquer with a coating thickness of **25 µm**. The thermo-insulating core of panels is a hard **polyisocyanurate foam (PIR)** with a density of **40 kg/m³ (+/- 10%)**. The calculated thermal conductivity coefficient is: $\lambda = 0.022 \text{ W/m}\cdot\text{K}$ (from November 2018 available are panels in the **MAX** version with a core with a coefficient of $\lambda = 0.020 \text{ W/m}\cdot\text{K}$). The modular width of the panel is **1000 mm**, and its standard lengths range from **2.0 m** to **12.0 m**. At the customer's special request, we deliver panels shorter than **2.0 m** and longer than **12.0 m**, with a maximum length of **16.5 m**. Water and air tightness of panel joints is assured by impregnated polyurethane seals (**PUS**) applied in the manufacturing process.

Thickness [mm]	Weight [kg/m²]			Modular width [mm]	Length: typical/available [m]	Lining standard RAL colours	
	facings 0,5/0,5 mm	facings 0,5/0,4 mm	facings 0,4/0,4 mm			external linings*	internal linings*
40/80	10,8	10,0	9,1	1000	2,0 - 12,0 / 16,5	3000, 5010, 6011, 7016, 7035, 8017, 9002, 9006, 9007, 9010	9002, 9010
60/100	11,6	10,8	9,9				
80/120	12,4	11,6	10,7				
100/140	13,2	12,4	11,5				
120/160	14,0	13,2	12,3				
150/190	15,2	14,4	13,5				
160/200	15,6	14,8	13,9				

* available colors depending on the thickness of the cladding, panels thicknesses and modular widths (details from the Sales Representative)

Thermal performance of panels depends on the thickness of the core and is expressed as a coefficient of heat transfer through a space dividing element (shown in the table below). Acoustic parameters were determined on the basis of **EN ISO 10140-3** and **EN-ISO 354**. Coldstore panels can be used as partitions of the requirements of sound insulation no greater than those specified below. Resistance to chemical corrosion - sandwich panels can be used in environments with atmosphere corrosiveness category C1, C2, C3 according to **EN ISO 12944-2**.

TECHNICAL PARAMETERS OF PIR CORE

Thickness [mm]	Heat-transfer coefficient U [W/m²·K]	Acoustic insulation	Reaction to fire	Fire resistance	NRO
	EN 14509	EN ISO 717-1	EN 13501-1	EN 13501-2	PN-B-02867
40/80	0,55*/ -	R _w = 24 dB R _{a1} = 22 dB R _{a2} = 20 dB	B-s1, d0	-	B _{ROOF} (t1,t2,t3)
60/100	0,37*/ -				
80/120	0,27*/ 0,25**				
100/140	0,22*/ 0,20**				
120/160	0,18*/ 0,17**				
150/190	0,15*/ 0,13**				
160/200	0,14*/ 0,13**				

* value of U-factor for traditional core panels with a coefficient of $\lambda = 0.022 \text{ W/m}\cdot\text{K}$

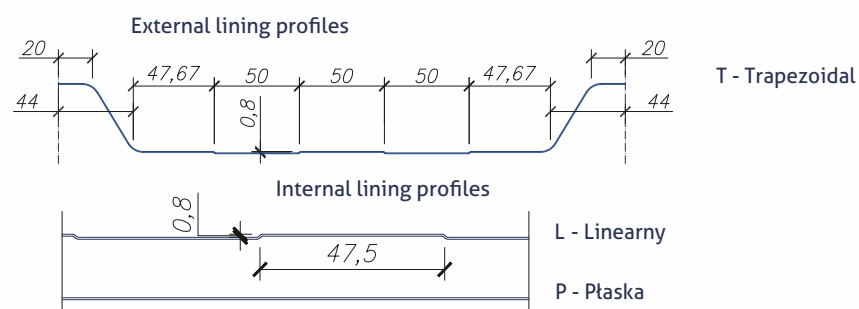
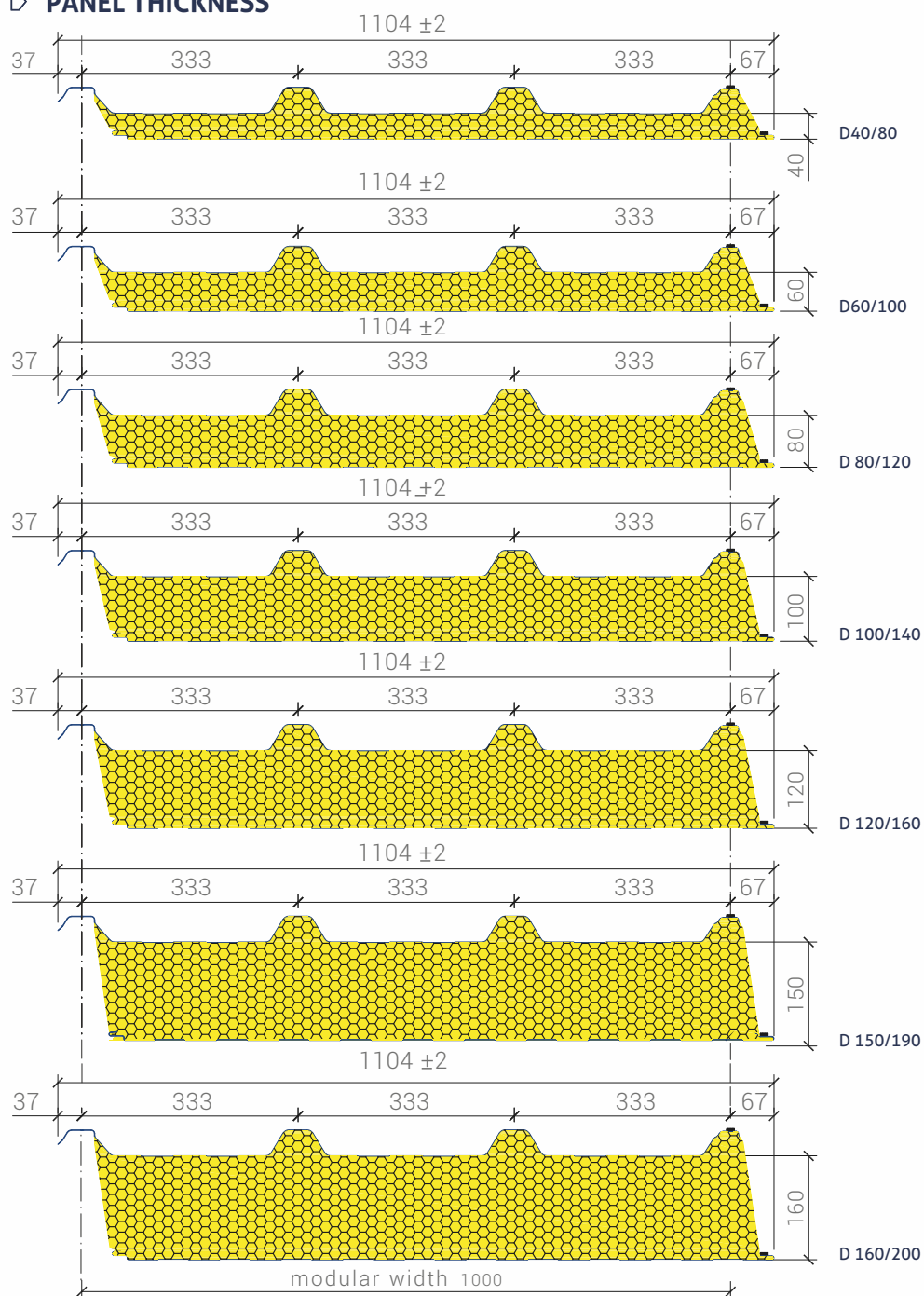
** value of U-factor for PIR MAX core panels with a coefficient of $\lambda = 0.020 \text{ W/m}\cdot\text{K}$

GS PIR D roof sandwich panel (Roof fastener)

GS PIR D panel manufacturing program:

- ▷ panel thicknesses
- ▷ profiles of outer and inner facing

▷ PANEL THICKNESS



▷ TABLE OF ALLOWED LOADS FOR GS PIR D SANDWICH PANEL

Table of allowed loads for **GS PIR D** wall sandwich panel with 0.5 mm facing in bright colours, mounted as a **multi-span** element, in direction to **support** (pressure).

Panel thickness	The load due to:	The maximum load [kN/m ²] on the span length [m]:										
		1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5
40/80	SGN (q _d)	5,80	3,80	2,25	1,48	1,04	0,77	0,60	0,48	0,39	0,32	0,27
	SGU (q _k)	6,97	4,56	3,10	2,18	1,57	1,16	0,87	0,66	0,51	0,40	0,32
60/100	SGN (q _d)	5,06	3,84	2,91	1,87	1,29	0,94	0,72	0,57	0,46	0,38	0,32
	SGU (q _k)	8,70	5,90	4,23	3,13	2,37	1,83	1,43	1,13	0,90	0,73	0,59
80/120	SGN (q _d)	4,28	3,23	2,61	2,19	1,55	1,12	0,84	0,66	0,53	0,43	0,36
	SGU (q _k)	11,27	7,78	5,74	4,37	3,38	2,65	2,12	1,70	1,38	1,14	0,94
100/140	SGN (q _d)	3,90	2,94	2,37	1,99	1,72	1,31	0,98	0,76	0,60	0,49	0,41
	SGU (q _k)	14,70	10,24	7,60	5,87	4,60	3,65	2,95	2,40	1,97	1,64	1,36
120/160	SGN (q _d)	3,99	3,00	2,42	2,03	1,75	1,54	1,30	1,01	0,81	0,66	0,55
	SGU (q _k)	17,59	12,35	9,24	7,19	5,72	4,60	3,75	3,08	2,55	2,14	1,80
150/190	SGU (q _k)	10,31	7,67	6,11	5,09	3,49	2,51	1,87	1,45	1,15	0,93	0,77
	SGU (q _k)	17,19	12,25	9,30	7,35	5,97	4,95	4,15	3,49	2,96	2,53	2,17
160/200	SGN (q _d)	10,95	8,14	6,49	5,40	3,85	2,78	2,09	1,62	1,29	1,05	0,87
	SGU (q _k)	18,35	13,10	9,96	7,89	6,43	5,35	4,49	3,79	3,23	2,76	2,38

Table of allowed loads for **GS PIR D** wall sandwich panel with 0.5 mm facing in bright colours, mounted as a **multi-span** element, in direction from **support** (suction).

Panel thickness	The load due to:	The maximum load [kN/m ²] on the span length [m]:										
		1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5
40/80	SGN (q _d)	2,76	2,07	1,66	1,38	1,18	1,04	0,92	0,81	0,67	0,56	0,48
	SGU (q _k)	7,10	4,66	3,20	2,26	1,65	1,22	0,93	0,71	0,55	0,44	0,35
60/100	SGN (q _d)	2,76	2,07	1,66	1,38	1,18	1,04	0,92	0,83	0,75	0,69	0,64
	SGU (q _k)	8,82	6,01	4,33	3,22	2,45	1,89	1,49	1,18	0,95	0,77	0,64
80/120	SGN (q _d)	2,76	2,07	1,66	1,38	1,18	1,04	0,92	0,83	0,75	0,69	0,64
	SGU (q _k)	11,41	7,91	5,85	4,46	3,46	2,74	2,19	1,76	1,45	1,19	0,99
100/140	SGN (q _d)	2,76	2,07	1,66	1,38	1,18	1,04	0,92	0,83	0,75	0,69	0,64
	SGU (q _k)	14,85	10,37	7,73	5,98	4,69	3,75	3,03	2,47	2,04	1,69	1,42
120/160	SGN (q _d)	2,76	2,07	1,66	1,38	1,18	1,04	0,92	0,83	0,75	0,69	0,64
	SGU (q _k)	17,75	12,49	9,36	7,31	5,83	4,70	3,84	3,16	2,63	2,20	1,86
150/190	SGU (q _k)	2,76	2,07	1,66	1,38	1,18	1,04	0,92	0,83	0,75	0,69	0,64
	SGU (q _k)	17,32	12,38	9,42	7,46	6,07	5,05	4,23	3,56	3,03	2,59	2,24
160/200	SGN (q _d)	2,76	2,07	1,66	1,38	1,18	1,04	0,92	0,83	0,75	0,69	0,64
	SGU (q _k)	18,48	13,24	10,09	8,01	6,53	5,44	4,57	3,86	3,30	2,83	2,45

The load capacity tables have been developed according to **EN 14509** for panels with PIR core with claddings in light colors for an internal temperature of **20 °C**. Deflection condition was assumed as **L/200**. In the case of a different sheet thickness, limit deflections, temperatures, fastening or dark colors of the cladding, separate calculations are necessary. Minimum width of supports - **40 mm** and **60 mm** (indirect). Number of fasteners necessary on intermediate supports - **4**, on extreme supports - **3**. Detailed tables of permissible loads are available on the website.

▷ PACKING

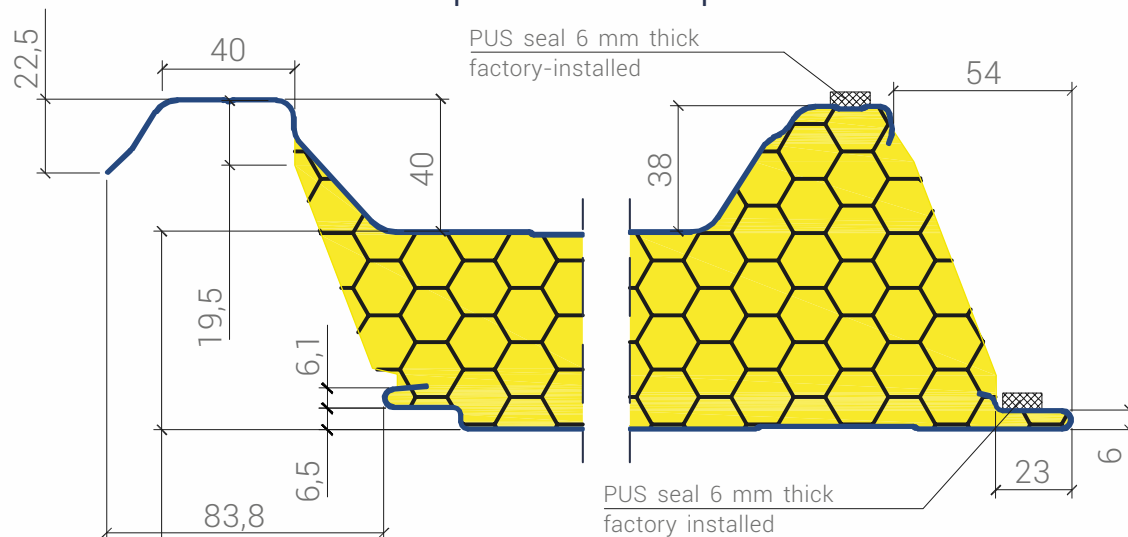
GS PIR D sandwich panels are packed in packages on pallets to allow their transport. The number of panels in each package depends on their thickness. Details in the table below.

Panel thickness [mm]	40/80	60/100	80/120	100/140	120/160	150/190	160/200
Maximum number of panels in one batch	14	11	9	8	7	6	6

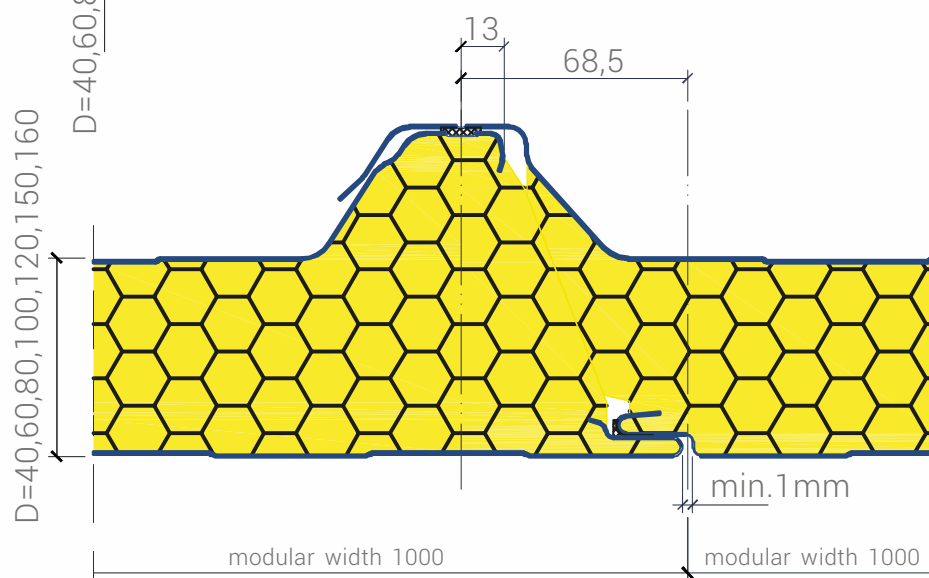
Selected details of cladding made of GS-PIR D roof panel

Shape of cam-lock. Details of panel connection	086
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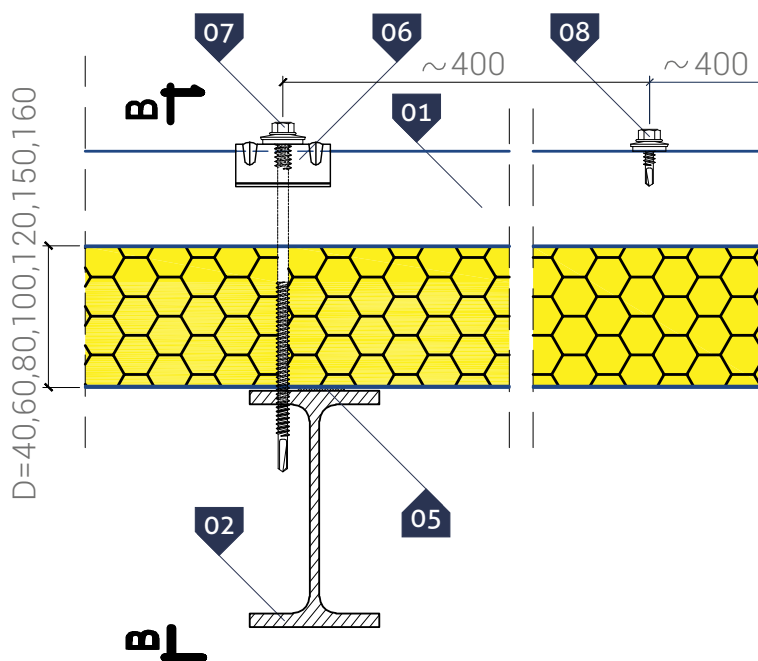
Shape of cam-lock for panels



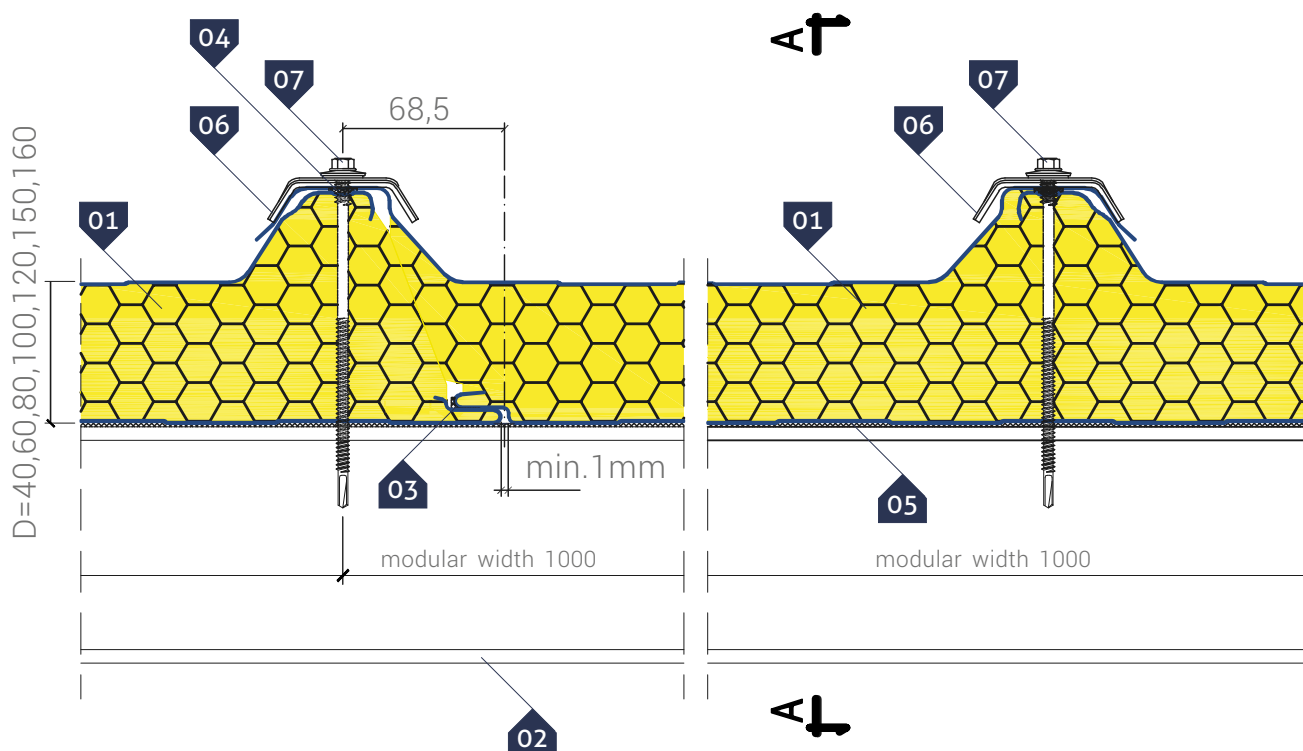
Detail of panels' connection



A-A cross-section



B-B cross-section



KEY:

- 01. GS PIR D roof panel
- 02. Purlin acc. to structure design
- 03. Lower PUS gasket installed at the factory
- 04. Upper PUS gasket installed at the factory

- 05. Polyethylene, self-adhesive sealing tape (PES)*
- 06. Calotte - clamping washer
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector for steel sheets

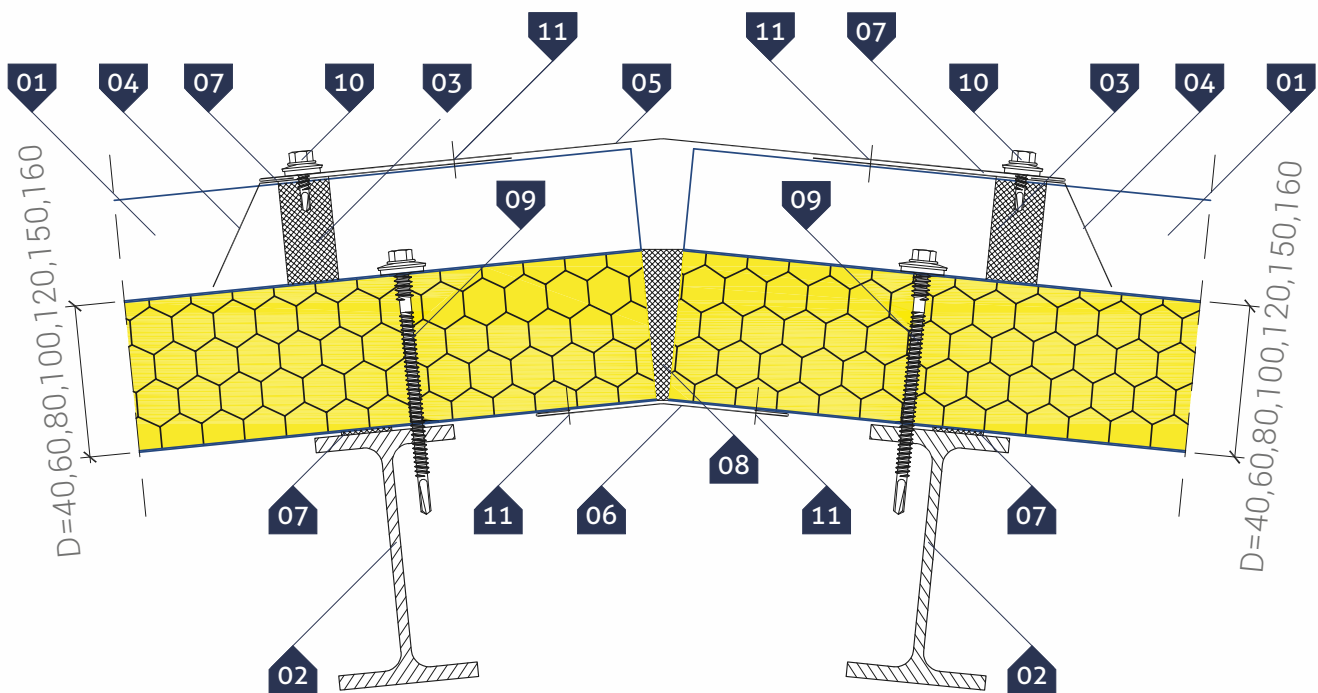
NOTE:

Each panel should be fastened widthwise to the structure with two fasteners and with three fasteners at the roof edges (for full-width panels).

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of panel joining in the roof ridge



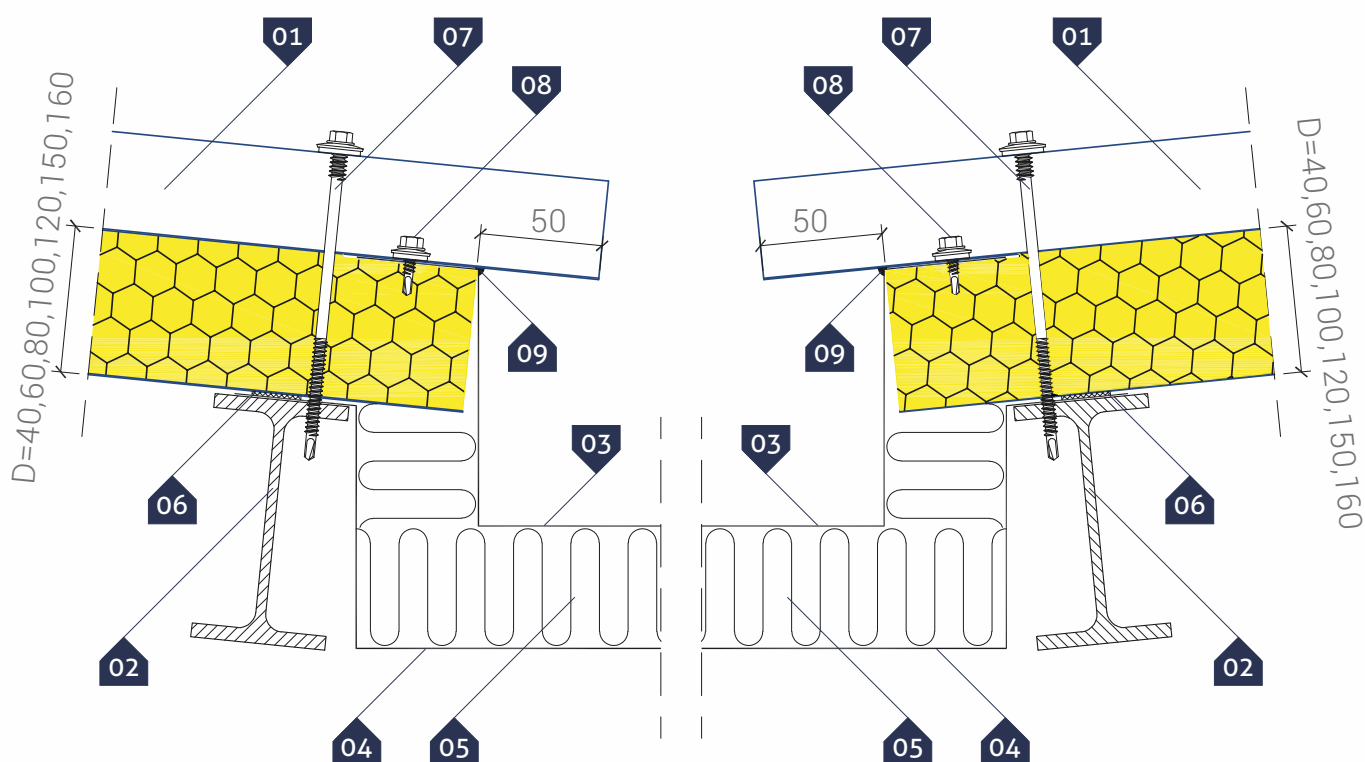
KEY:

- 01. GS PIR D roof panel
- 02. Purlin acc. to structure design
- 03. Profiled seal (PE)
- 04. Profiled flashing OB-28
- 05. Top roof ridge flashing OB-22
- 06. Bottom roof ridge flashing OB-23
- 07. Polyethylene, self-adhesive sealing tape (PES)* - mounted at the edge of OB-22 processing
- 08. Polyurethane caulking foam
- 09. Self-drilling connector for sandwich panels
- 10. Self-drilling connector with a hex head for steel sheets
- 11. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

▷ Detail of water discharge in the rain water outlet



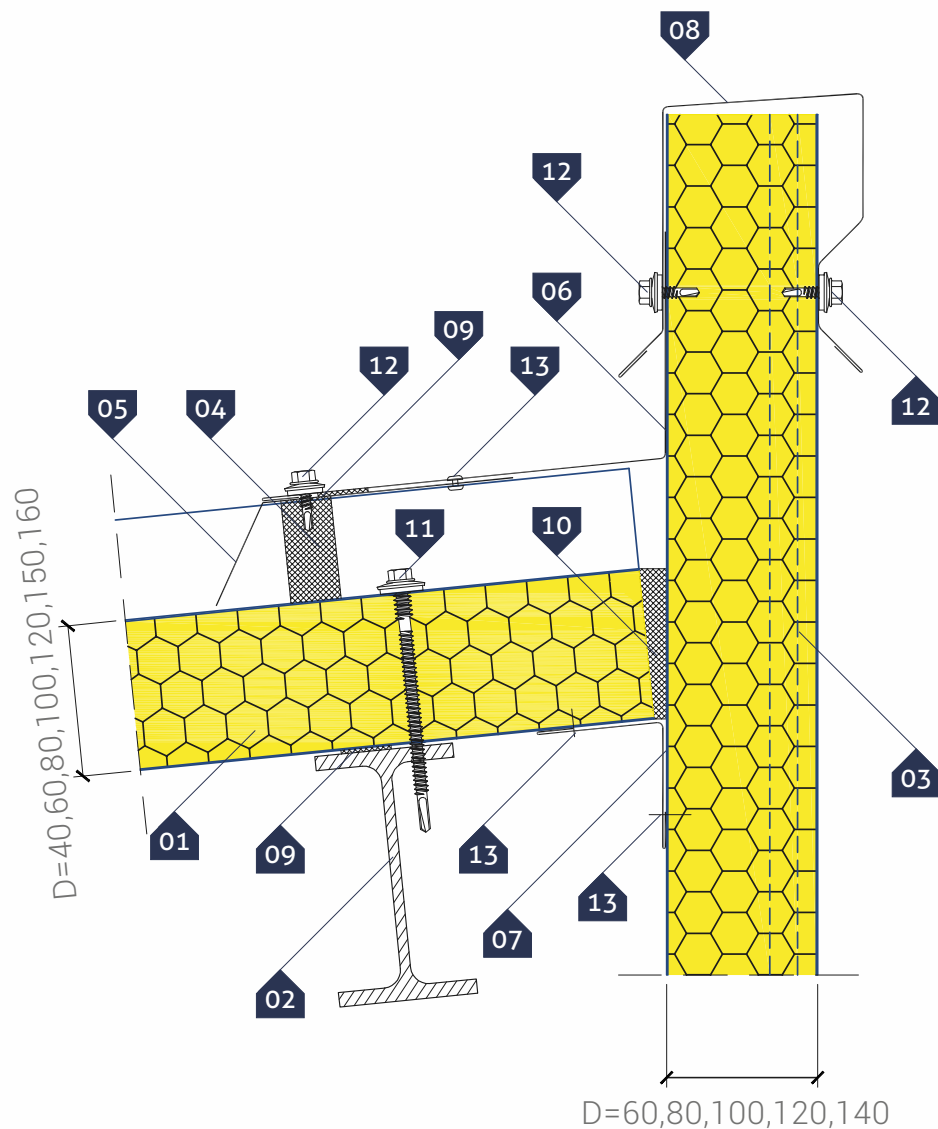
▷ KEY:

- 01. GS PIR D roof panel
- 02. Purlin acc. to structure design
- 03. Individual inner gutter profile
- 04. Individual outer gutter profile
- 05. Thermal insulation carried out on the fastening
- 06. Polyethylene, self-adhesive sealing tape (PES)*
- 07. Self-drilling connector for sandwich panels
- 08. Self-drilling connector with a hex head for steel sheets
- 09. Butyl sealing compound

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of roof near the attic
Slope profile



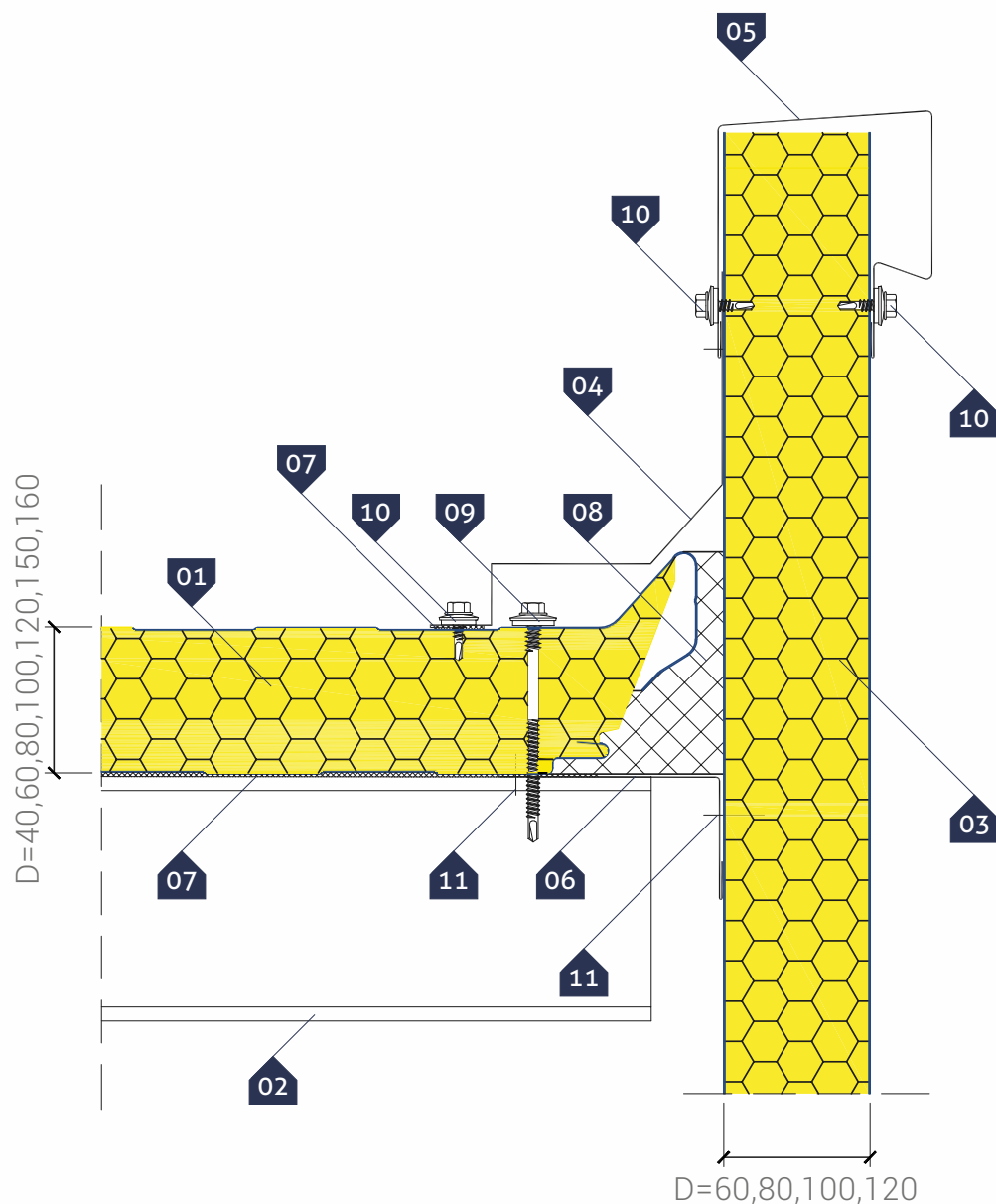
KEY:

- 01. GS PIR D roof panel
- 02. Purlin acc. to structure design
- 03. GS insPIRe[®] U wall panel
- 04. Profiled seal (PE)
- 05. Profiled flashing OB-28
- 06. Roof covering flashing OB-29
- 07. Corner treatment OB-02
- 08. Attic flashing OB-34
- 09. Polyethylene, self-adhesive sealing tape (PES)*
- 10. Polyurethane caulking foam
- 11. Self-drilling connector for sandwich panels
- 12. Self-drilling connector with a hex head for steel sheets
- 13. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

- ▷ Detail of roof near the attic
Roof start



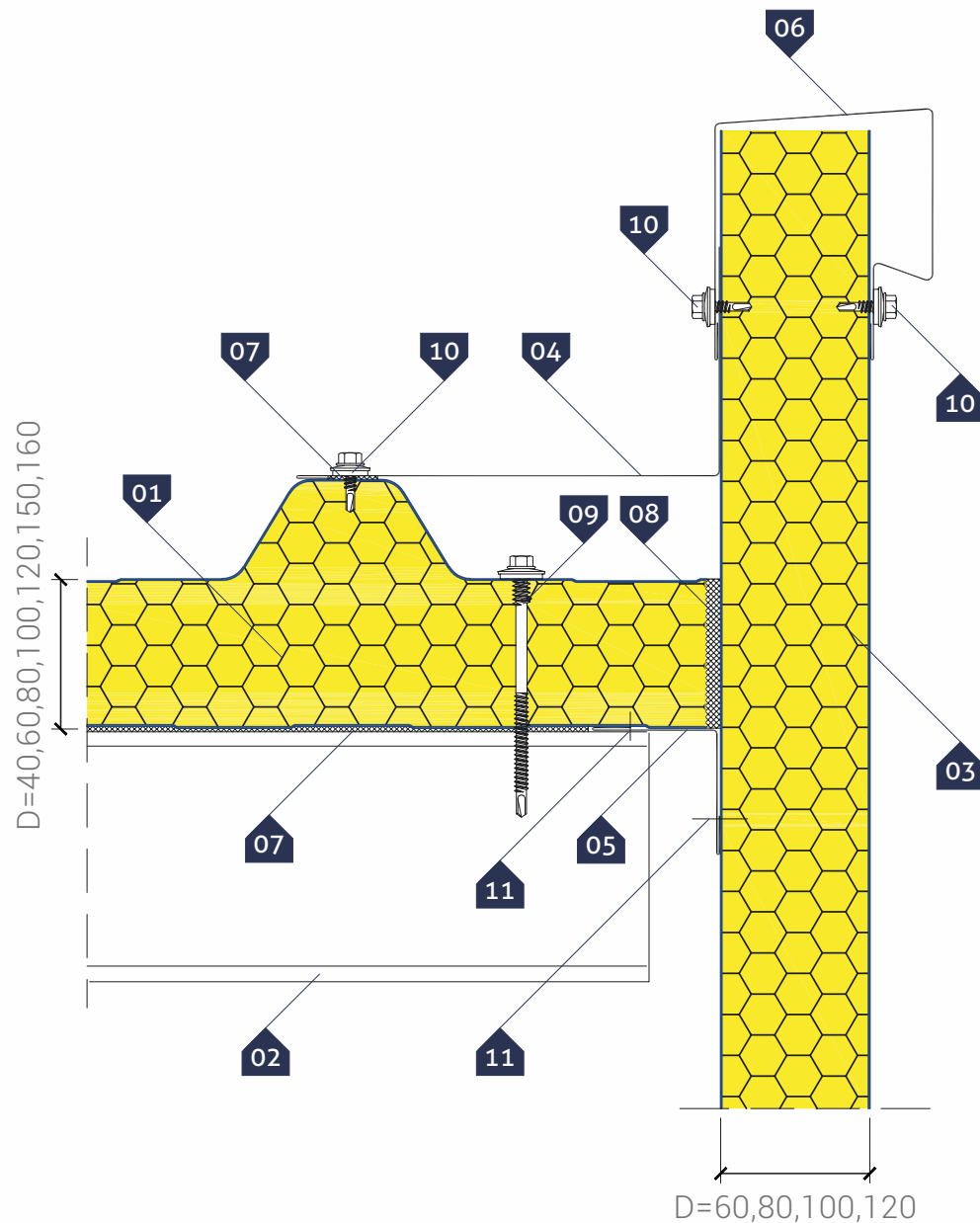
▷ **KEY:**

- 01. **GS PIR D** roof panel
- 02. Purlin acc. to structure design
- 03. **GS insPIRe[®] S** wall panel
- 04. Non-standard masking flashing
- 05. Attic flashing **OB-05**
- 06. Corner treatment **OB-02**
- 07. Polyethylene, self-adhesive sealing tape (**PES**)*
- 08. Filling with thermal insulation material
- 09. Self-drilling connector for sandwich panels
- 10. Self-drilling connector with a hex head for steel sheets
- 11. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of roof near the attic
Roof end



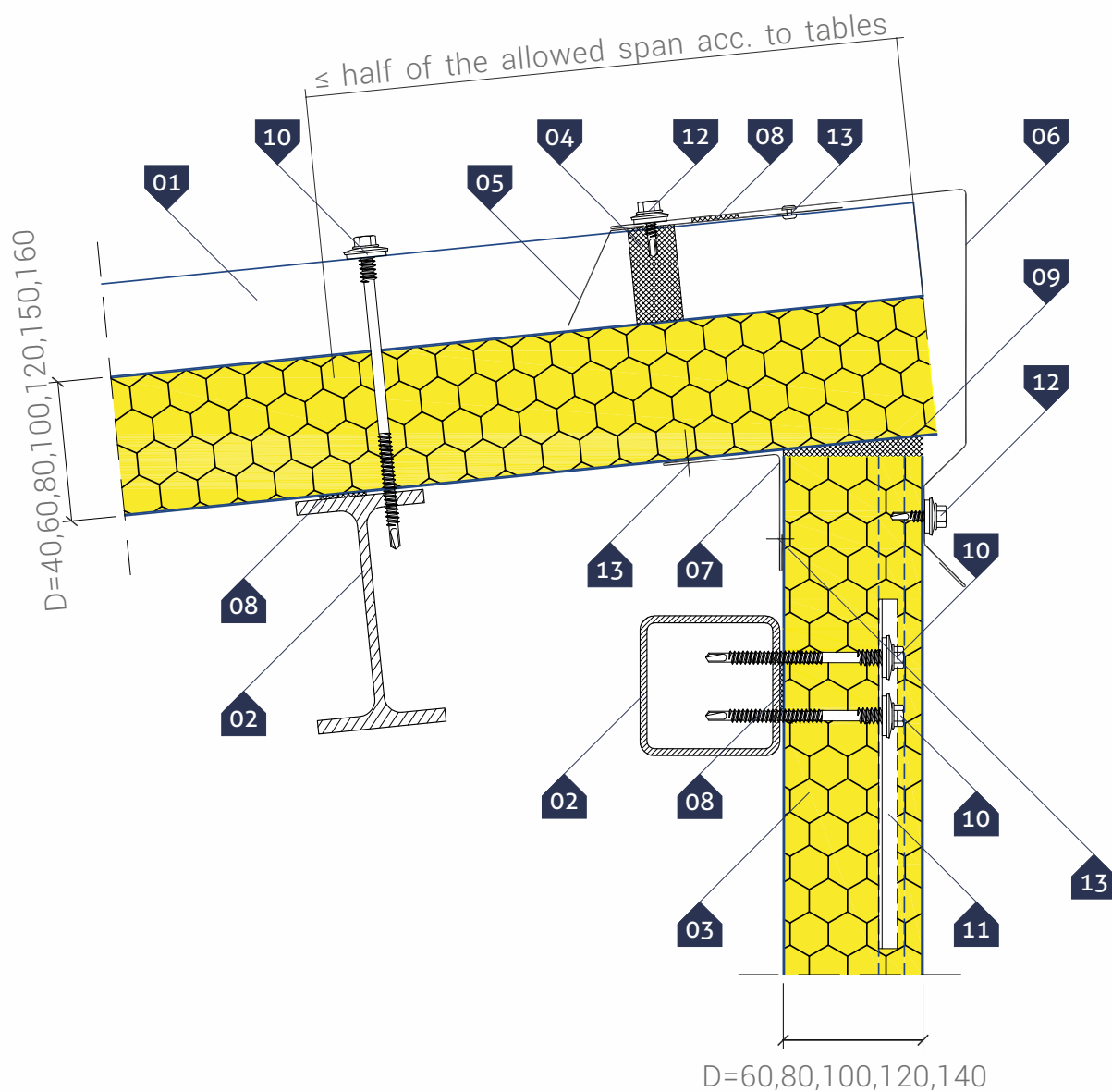
KEY:

- 01. GS PIR D roof panel
- 02. Purlin acc. to structure design
- 03. GS insPIRe[®] S wall panel
- 04. OB-29 slope masking flashing (for an angle $\alpha=90$ horizontal measurement)
- 05. Corner treatment OB-02
- 06. Attic flashing OB-35
- 07. Polyethylene, self-adhesive sealing tape (PES)*
- 08. Polyurethane caulking foam
- 09. Self-drilling connector for sandwich panels
- 10. Self-drilling connector with a hex head for steel sheets
- 11. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of connection with the wall in the monopitch roof
Type I



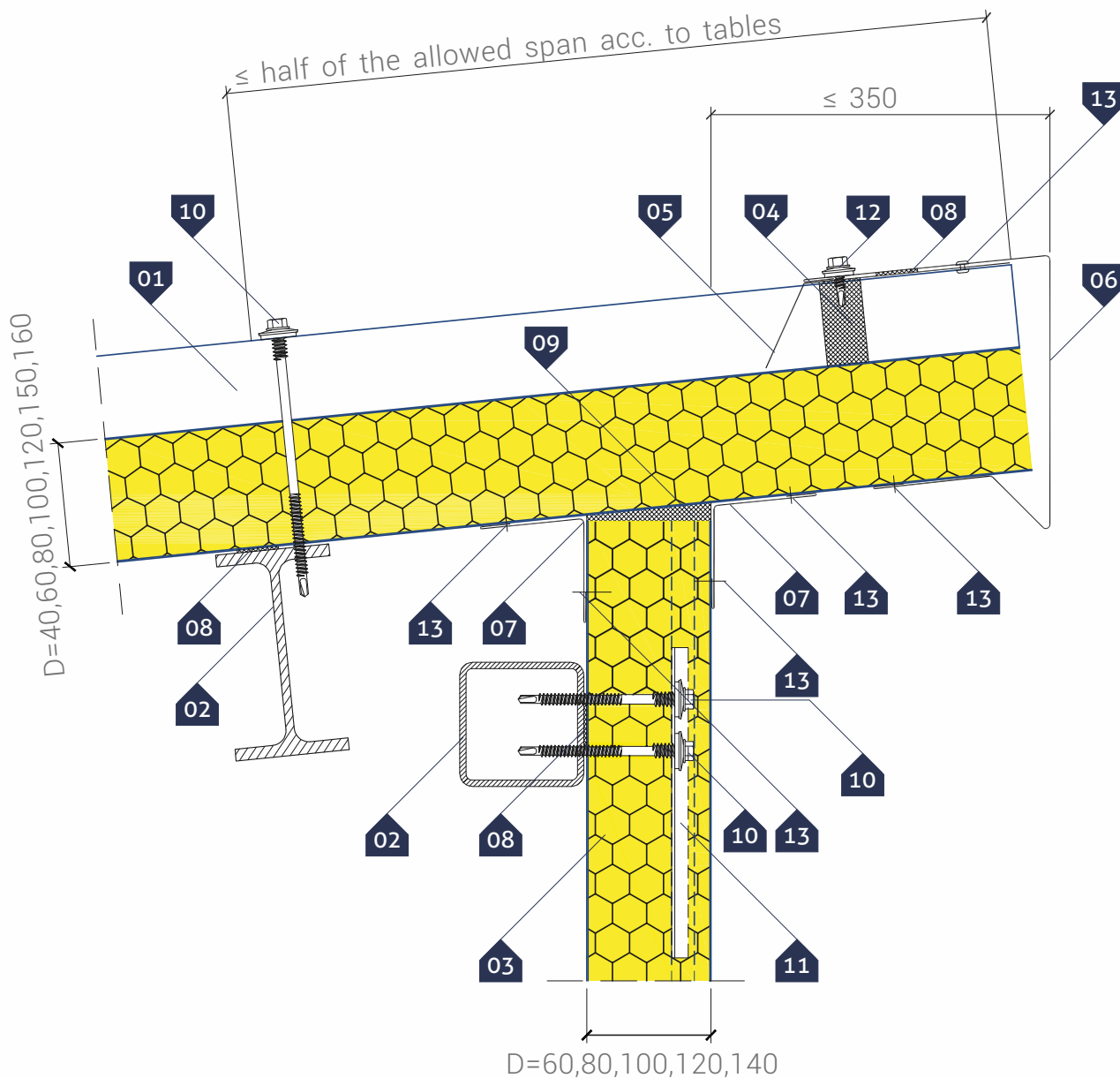
KEY:

- 01. GS PIR D roof panel
- 02. Structure acc. to structure design
- 03. GS insPIRe[®] U wall panel
- 04. Profiled seal (PE)
- 05. Profiled flashing OB-28
- 06. Top flashing OB-32
- 07. Corner treatment OB-02
- 08. Polyethylene, self-adhesive sealing tape (PES)*
- 09. Polyurethane caulking foam
- 10. Self-drilling connector for sandwich panels
- 11. PM1 spacer
- 12. Self-drilling connector with a hex head for steel sheets
- 13. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of connection with the wall in the monopitch roof
Type II



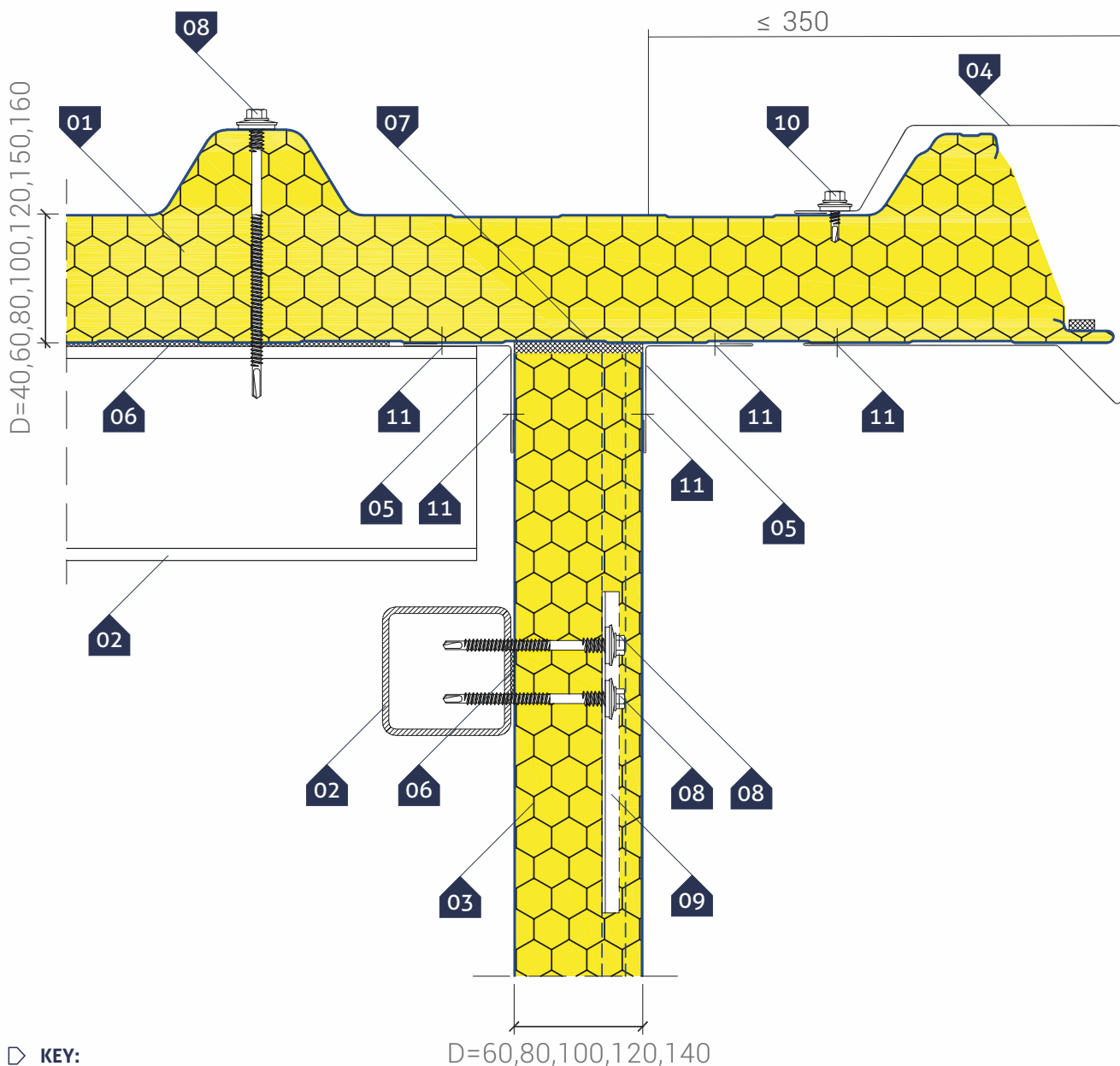
KEY:

- 01. GS PIR D roof panel
- 02. Structure acc. to structure design
- 03. GS insPIRe[®] U wall panel
- 04. Profiled seal (PE)
- 05. Profiled flashing OB-28
- 06. Top flashing OB-31
- 07. Inner corner flashing OB-02
- 08. Polyethylene, self-adhesive sealing tape (PES)*
- 09. Polyurethane caulking foam
- 10. Self-drilling connector for sandwich panels
- 11. PM1 spacer
- 12. Self-drilling connector with a hex head for steel sheets
- 13. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of eave transverse to the slope
Right side



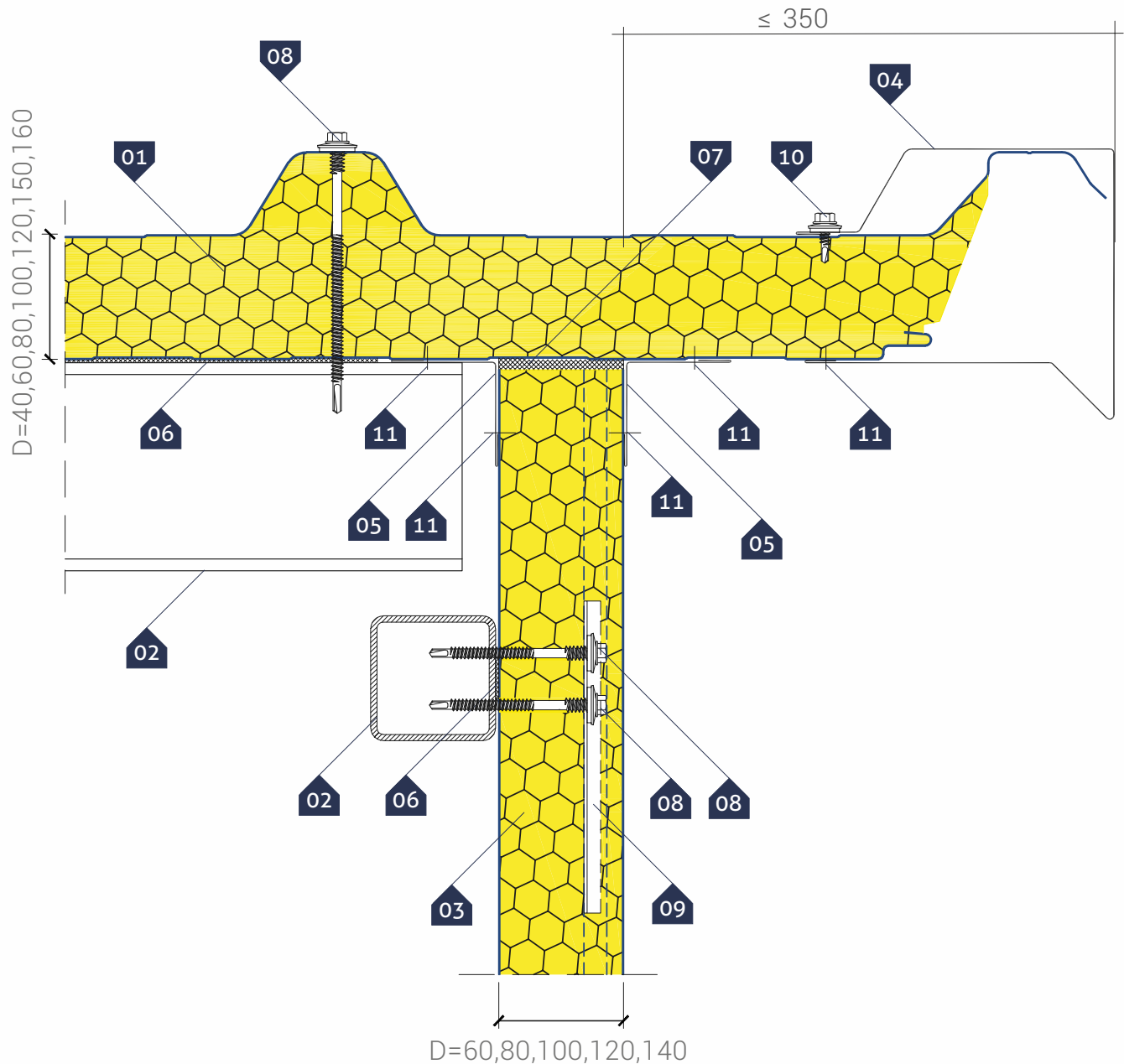
KEY:

- 01. GS PIR D roof panel
- 02. Structure acc. to structure design
- 03. GS insPIRe[®] U wall panel
- 04. Covering flashing **OB-24**
- 05. Inner corner flashing **OB-02**
- 06. Polyethylene, self-adhesive sealing tape (**PES**)*
- 07. Polyurethane caulking foam
- 08. Self-drilling connector for sandwich panels
- 09. **PM1** spacer
- 10. Self-drilling connector with a hex head for steel sheets
- 11. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of eave transverse to the slope
Left side



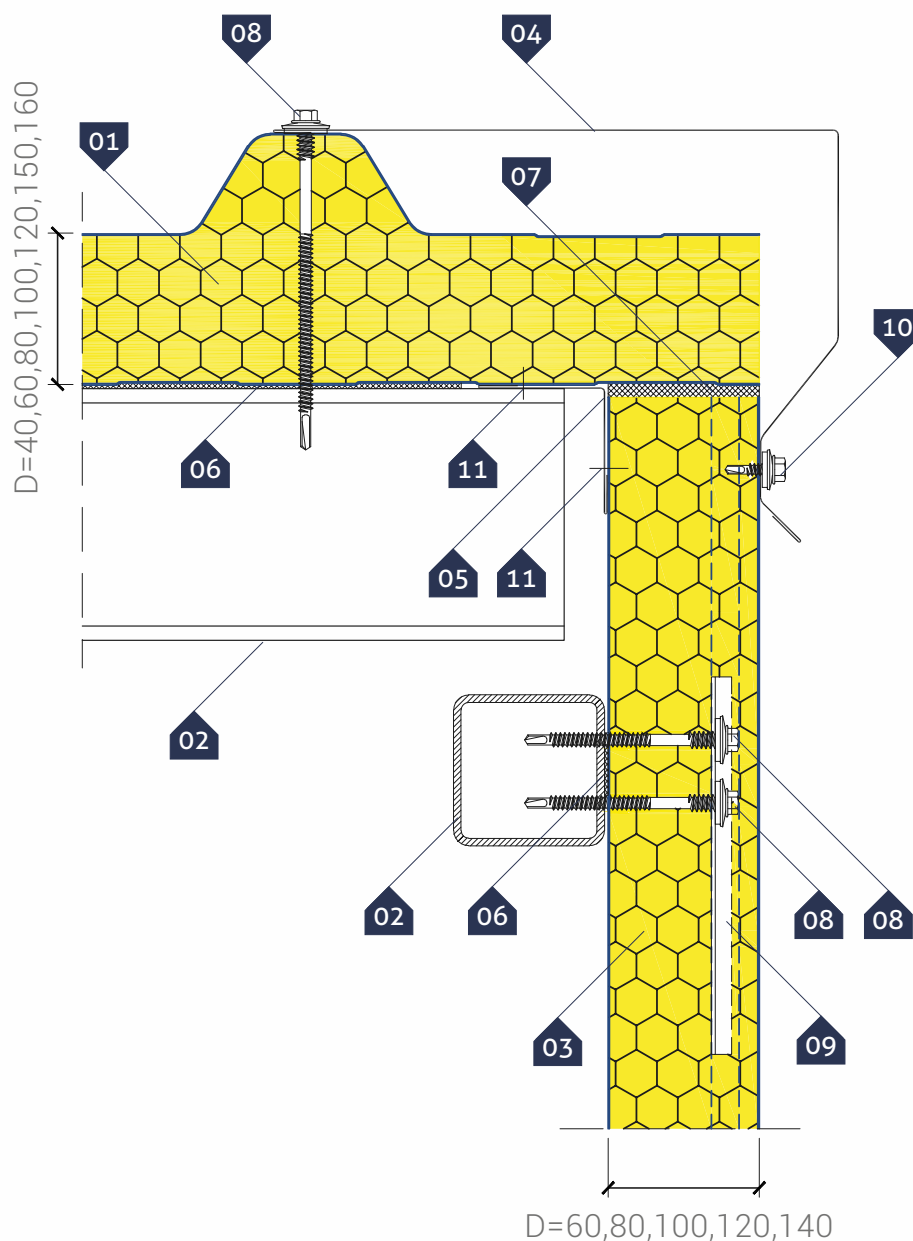
KEY:

- 01. GS PIR D roof panel
- 02. Structure acc. to structure design
- 03. GS insPIRe[®] U wall panel
- 04. Covering flashing **OB-24**
- 05. Corner flashing **OB-02**
- 06. Polyethylene, self-adhesive sealing tape (**PES**)*
- 07. Polyurethane caulking foam
- 08. Self-drilling connector for sandwich panels
- 09. **PM1** spacer
- 10. Self-drilling connector with a hex head for steel sheets
- 11. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of roof edge flush with wall footprint
Type I



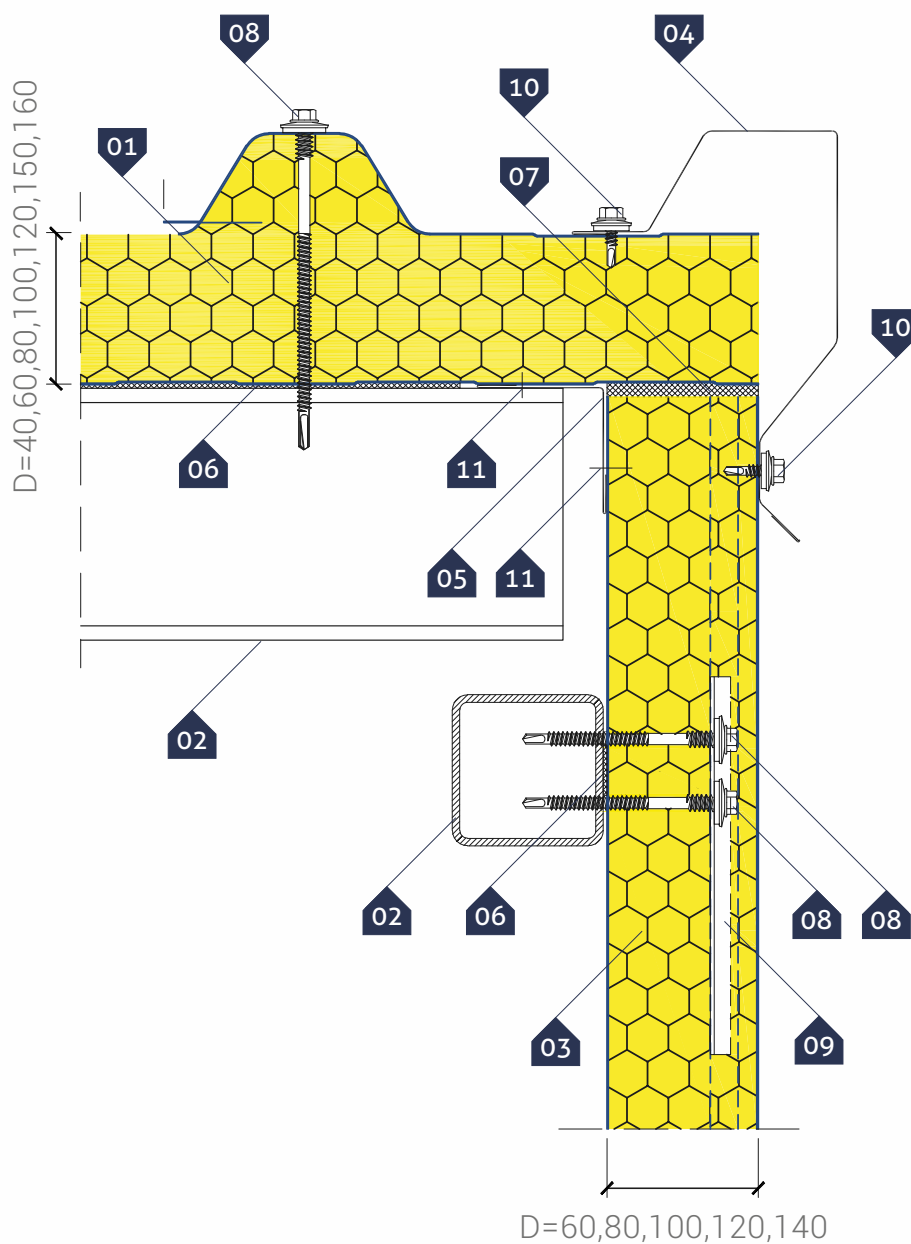
KEY:

- 01. GS PIR D roof panel
- 02. Structure acc. to structure design
- 03. GS insPIRe[®] U wall panel
- 04. Custom covering flashing
- 05. Inner corner flashing **OB-02**
- 06. Polyethylene, self-adhesive sealing tape (**PES**)*
- 07. Polyurethane caulking foam
- 08. Self-drilling connector for sandwich panels
- 09. **PM1** spacer
- 10. Self-drilling connector with a hex head for steel sheets
- 11. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of roof edge flush with wall footprint
Type II



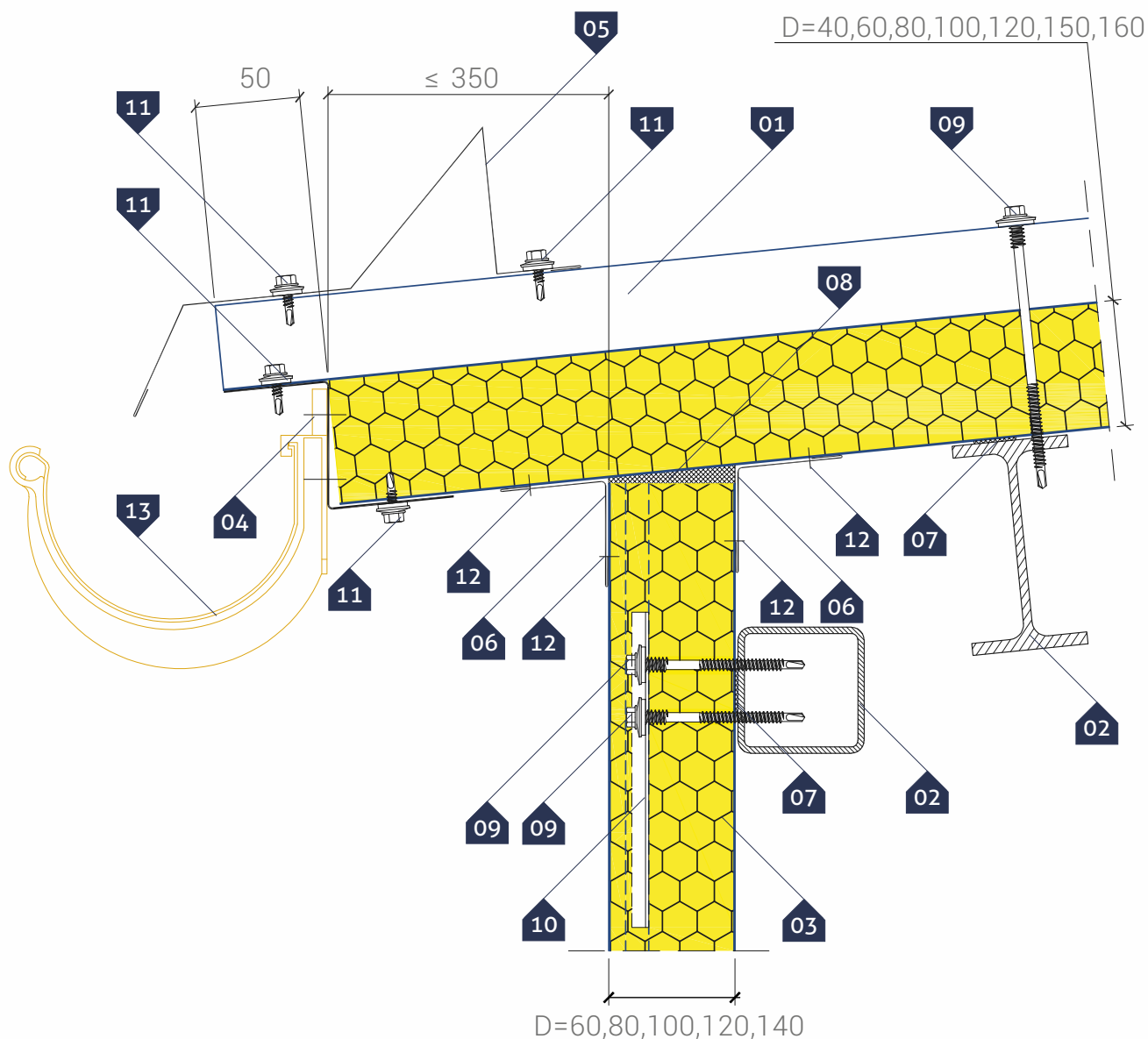
KEY:

- 01. GS PIR D roof panel
- 02. Structure acc. to structure design
- 03. GS insPIRe[®] U wall panel
- 04. Custom covering flashing
- 05. Inner corner flashing **OB-02**
- 06. Polyethylene, self-adhesive sealing tape (**PES**)*
- 07. Polyurethane caulking foam
- 08. Self-drilling connector for sandwich panels
- 09. **PM1** spacer
- 10. Self-drilling connector with a hex head for steel sheets
- 11. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of water discharge to the gutter
Type I



KEY:

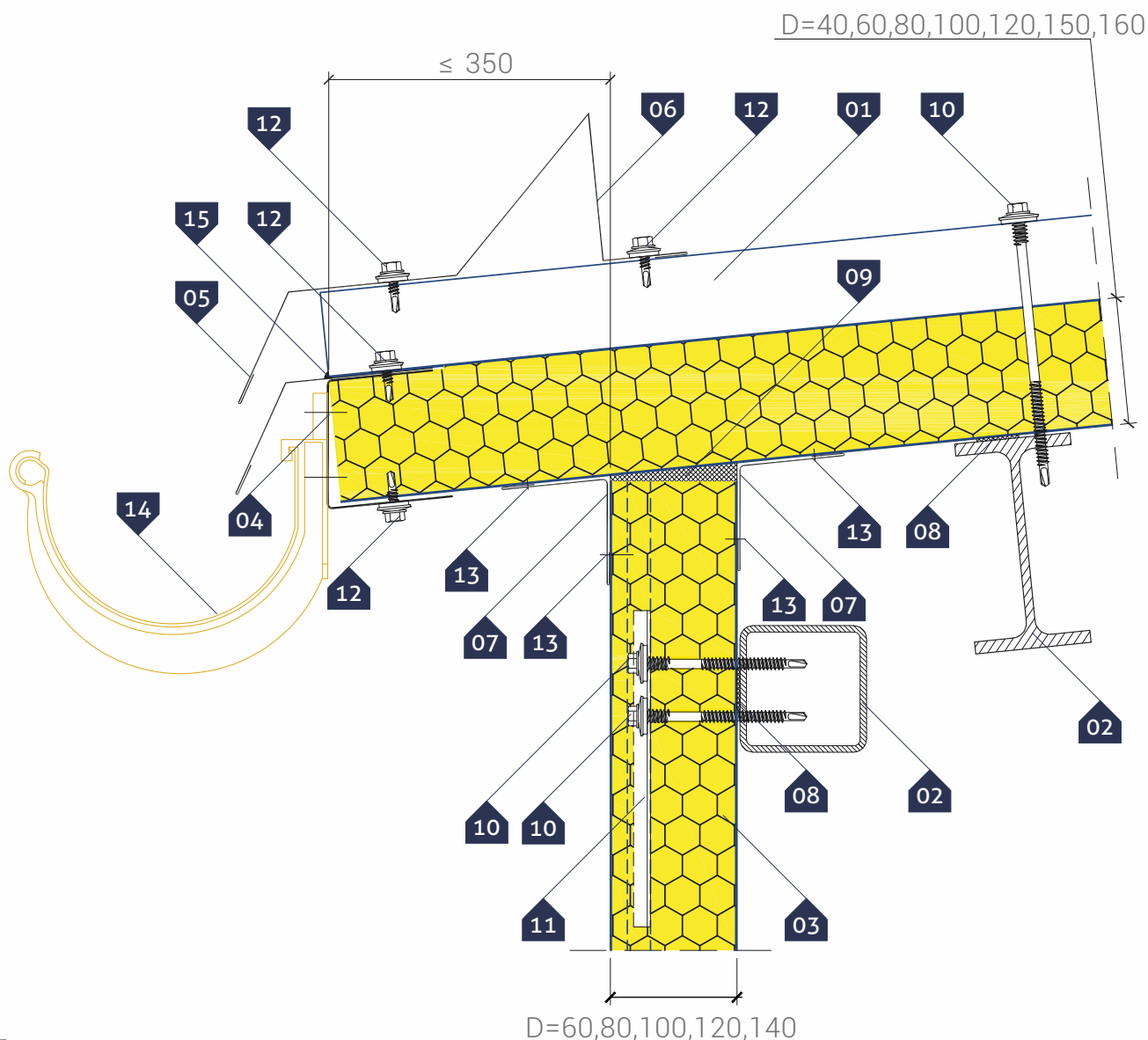
- 01. GS PIR D roof panel (edge cut at the production stage)
- 02. Structure acc. to structure design
- 03. GS insPIRe[®] U wall panel
- 04. OB-26 gutter zee (alternatively in the version made of coated metal sheet it is fitted with an additional flat bar between the back and the foam)
- 05. Snow barrier OB-27 (alternatively drip tray OB-33*)
- 06. Corner flashing OB-02
- 07. Polyethylene, self-adhesive sealing tape (PES)**
- 08. Polyurethane caulking foam
- 09. Self-drilling connector for sandwich panels
- 10. PM1 spacer
- 11. Self-drilling connector with a hex head for steel sheets
- 12. Self-drilling connector with a flat pan head for steel sheets
- 13. Gutter

* - use in atypical version with notching on both sides

** - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of water discharge to the gutter Type II



KEY:

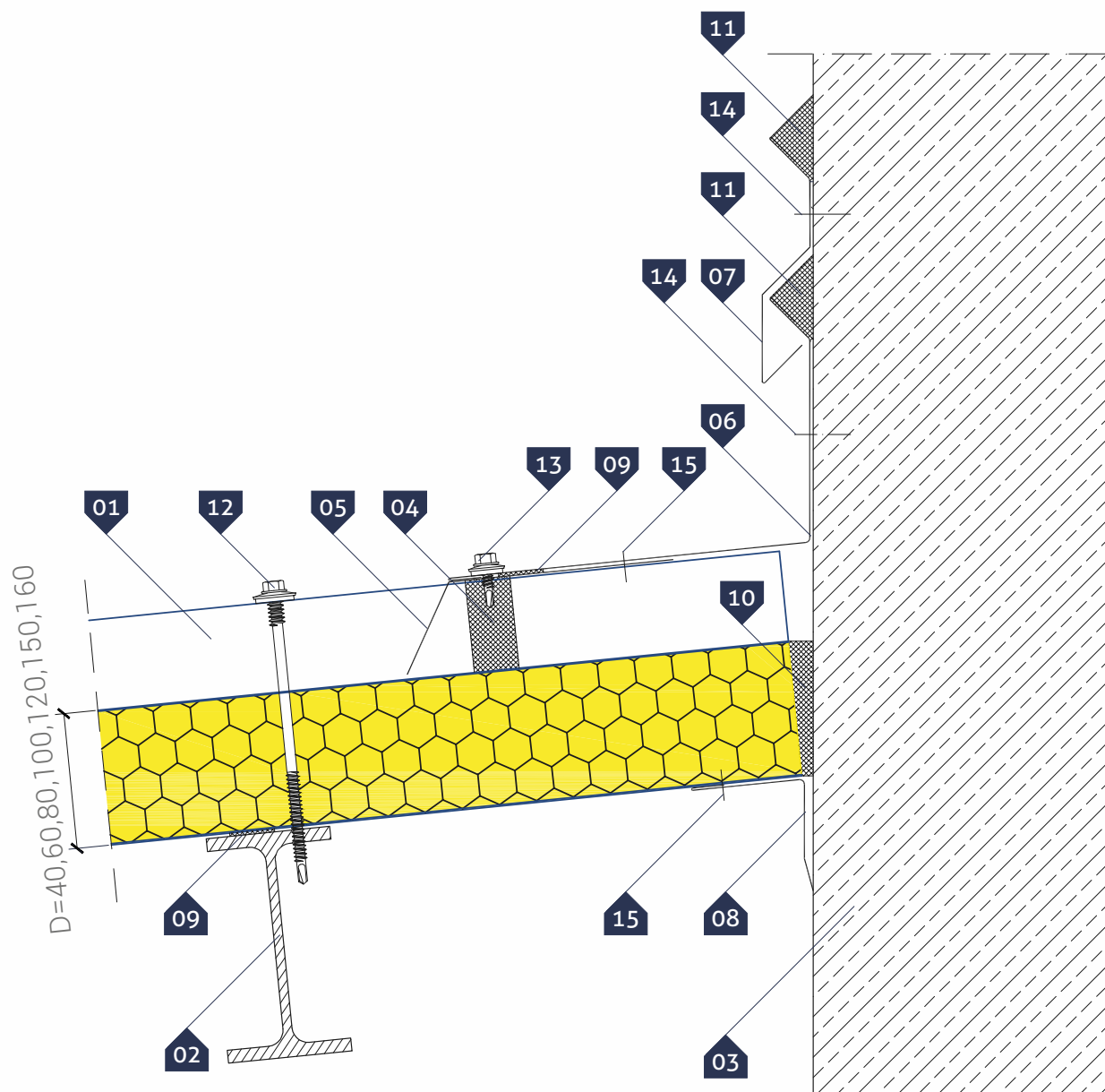
- 01. GS PIR D roof panel
- 02. Structure acc. to structure design
- 03. GS insPIRe[®] U wall panel
- 04. Gutter channel OB-25 (alternatively in the version made of coated metal sheet it is fitted with an additional flat bar between the back and the foam)
- 05. Drip edge OB-33
- 06. Snow barrier OB-27 (alternatively drip tray OB-33*)
- 07. Corner flashing OB-02
- 08. Polyethylene, self-adhesive sealing tape (PES)**
- 09. Polyurethane caulking foam
- 10. Self-drilling connector for sandwich panels
- 11. PM1 spacer
- 12. Self-drilling connector with a hex head for steel sheets
- 13. Self-drilling connector with a flat pan head for steel sheets
- 14. Gutter
- 15. Butyl sealing compound

* - use in a typical version with notching on both sides

** - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of panel connection with a reinforced concrete or brick wall
Section along the slope



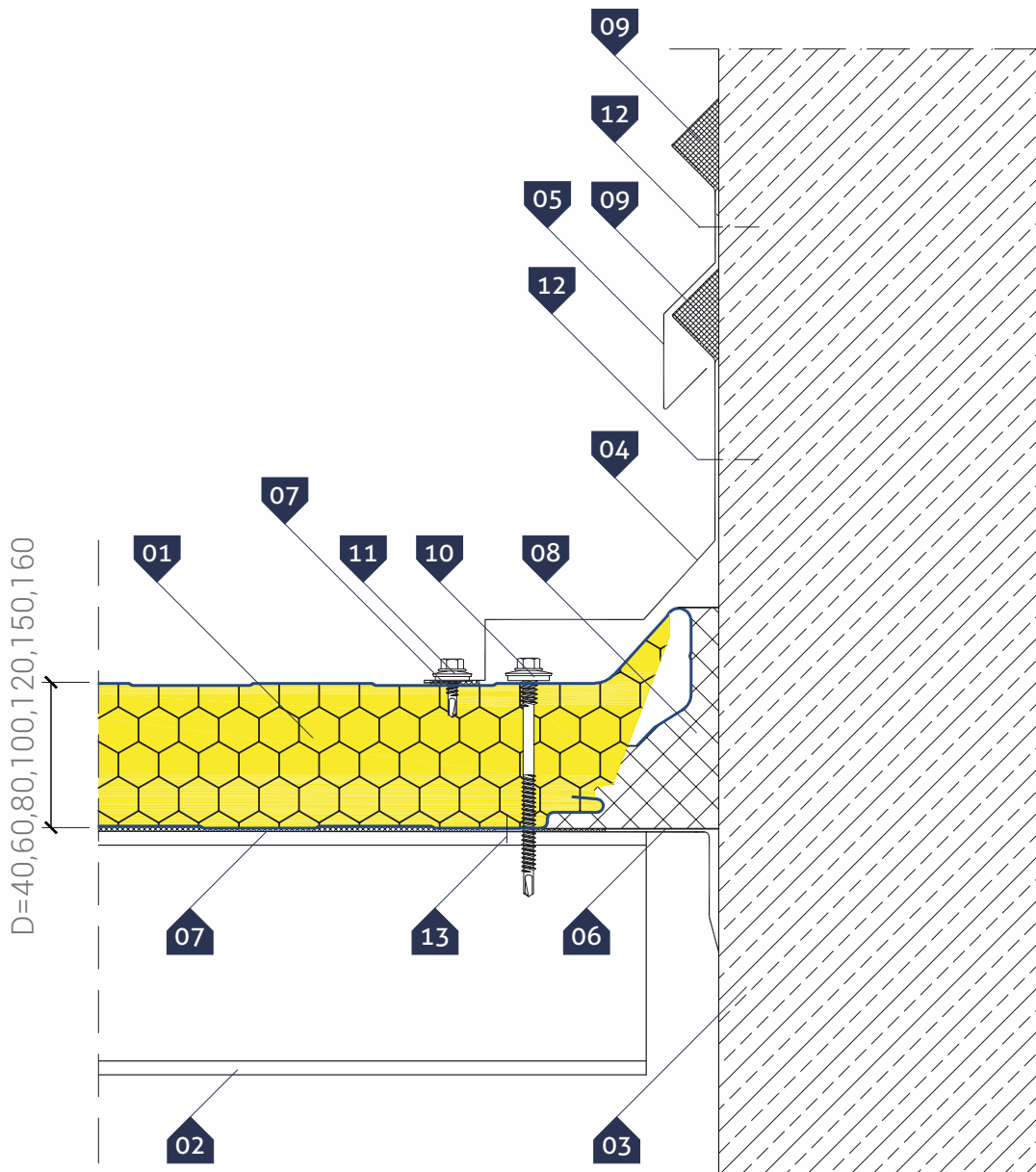
KEY:

- 01. GS PIR D roof panel
- 02. Purlin acc. to structure design
- 03. Reinforced concrete or masonry fire-wall
- 04. Profiled seal (PE)
- 05. Profiled flashing OB-28
- 06. Roof flashing OB-30
- 07. Drip edge OB-12
- 08. Internal corner flashing OB-07
- 09. Polyethylene, self-adhesive sealing tape (PES)*
- 10. Polyurethane caulking foam
- 11. Butyl sealing compound
- 12. Self-drilling connector for sandwich panels
- 13. Self-drilling connector with a hex head for steel sheets
- 14. Steel expansion joint for quick assembly
- 15. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

- Detail of panel connection with a reinforced concrete or brick wall
Roof start



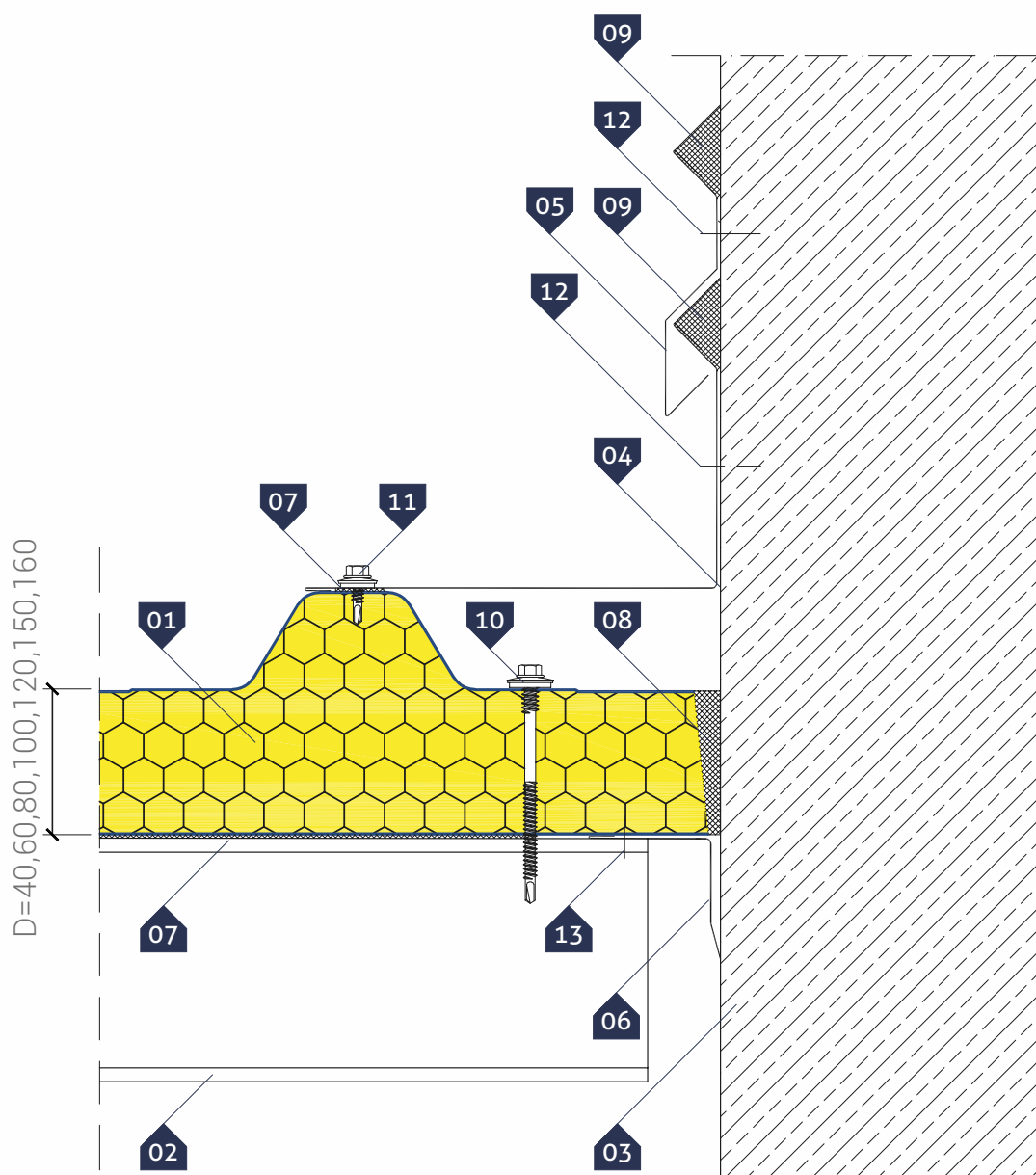
KEY:

- 01. GS PIR D roof panel
- 02. Purlin acc. to structure design
- 03. Reinforced concrete or masonry fire-wall
- 04. Non-standard masking flashing
- 05. Drip edge **OB-12**
- 06. Internal corner flashing **OB-07**
- 07. Polyethylene, self-adhesive sealing tape (**PES**)*
- 08. Filling with thermal insulation material
- 09. Butyl sealing compound
- 10. Self-drilling connector for sandwich panels
- 11. Self-drilling connector with a hex head for steel sheets
- 12. Mechanical connector selected for the material of the wall
- 13. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of panel connection with a reinforced concrete or brick wall
Roof end



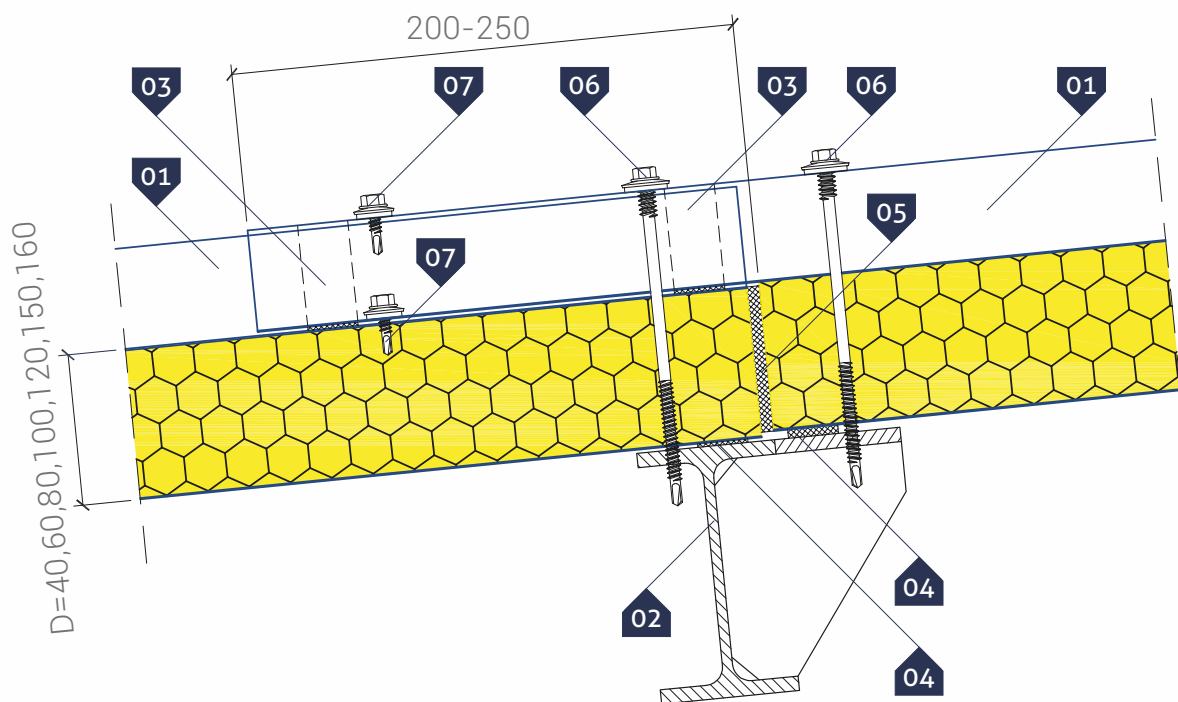
KEY:

- 01. GS PIR D roof panel
- 02. Purlin acc. to structure design
- 03. Reinforced concrete or masonry fire-wall
- 04. OB-30 slope flashing (for an angle $\alpha=90^\circ$ horizontal measurement)
- 05. Drip edge **OB-12**
- 06. Internal corner flashing **OB-07**
- 07. Polyethylene, self-adhesive sealing tape (PES)*
- 08. Polyurethane caulking foam
- 09. Butyl sealing compound
- 10. Self-drilling connector for sandwich panels
- 11. Self-drilling connector with a hex head for steel sheets
- 12. Steel expansion joint for quick assembly
- 13. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

- Detail of roof panel connection along the length
- Panel cut options

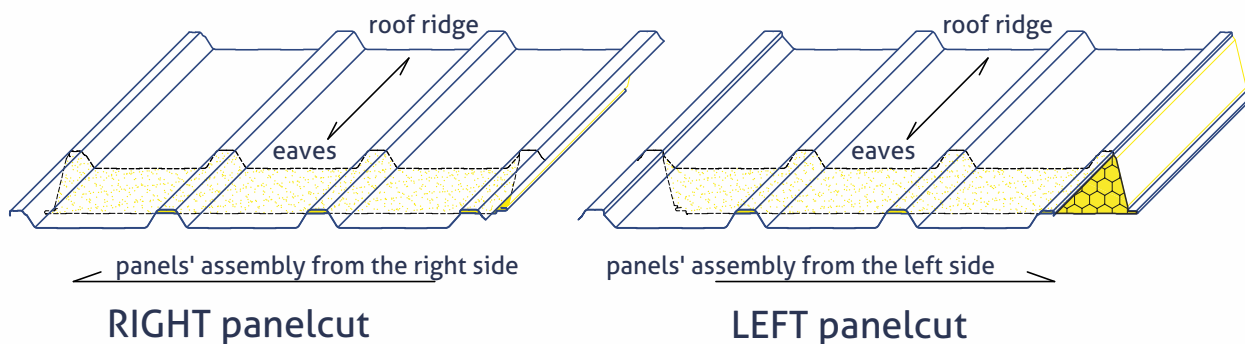


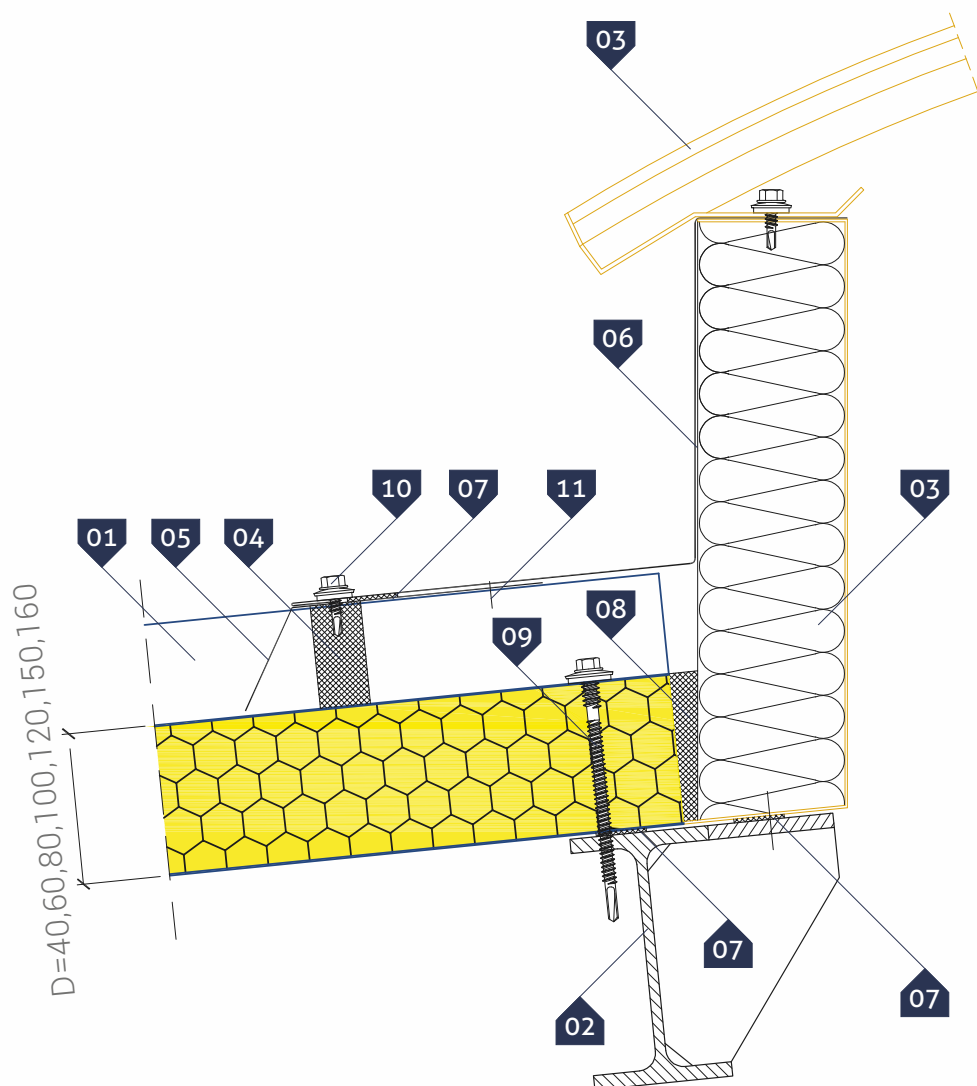
KEY:

- 01. GS PIR D roof panel
- 02. Purlin acc. to structure design
- 03. Butyl sealing compound
- 04. Polyethylene, self-adhesive sealing tape (PES)*
- 05. Polyurethane caulking foam
- 06. Self-drilling connector for sandwich panels
- 07. Self-drilling connector with a hex head for steel sheets

* - a recommended item

Panelcut options





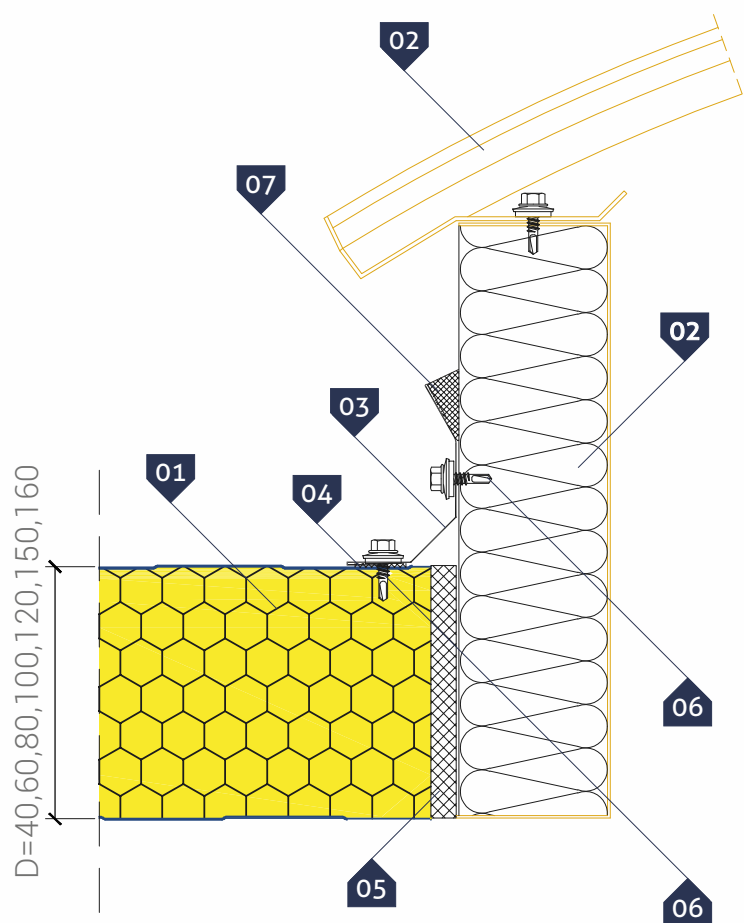
▷ **KEY:**

- 01. **GS PIR D** roof panel
- 02. Purlin acc. to structure design
- 03. Skylight with base
- 04. Profiled seal (**PE**)
- 05. Profiled flashing **OB-28**
- 06. Individual skylight flashing
- 07. Polyethylene, self-adhesive sealing tape (**PES**)*
- 08. Polyurethane caulking foam
- 09. Self-drilling connector for sandwich panels
- 10. Self-drilling connector with a hex head for steel sheets
- 11. Self-drilling connector with a flat pan head for steel sheets

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of panel connection with a skylight along the slope
Type I



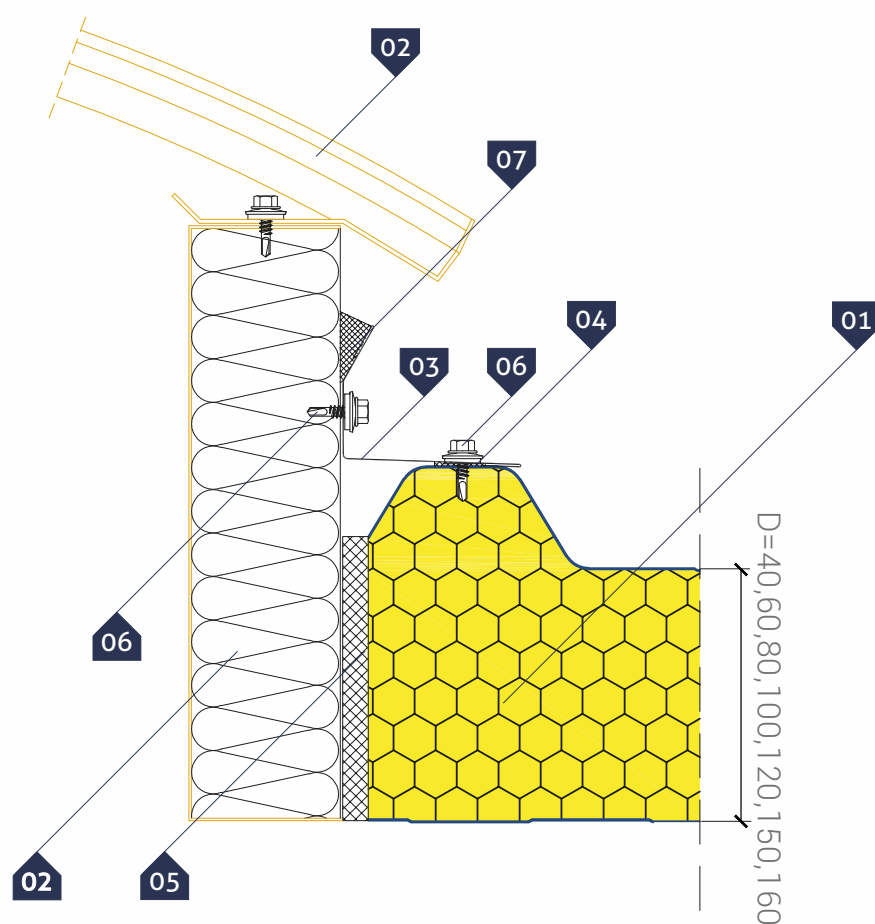
KEY:

- 01. GS PIR D roof panel
- 02. Skylight with base
- 03. Non-standard masking flashing
- 04. Polyethylene, self-adhesive sealing tape (PES)*
- 05. Polyurethane caulking foam
- 06. Self-drilling connector with a hex head for steel sheets
- 07. Butyl sealing compound

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of panel connection with a skylight along the slope
Type II



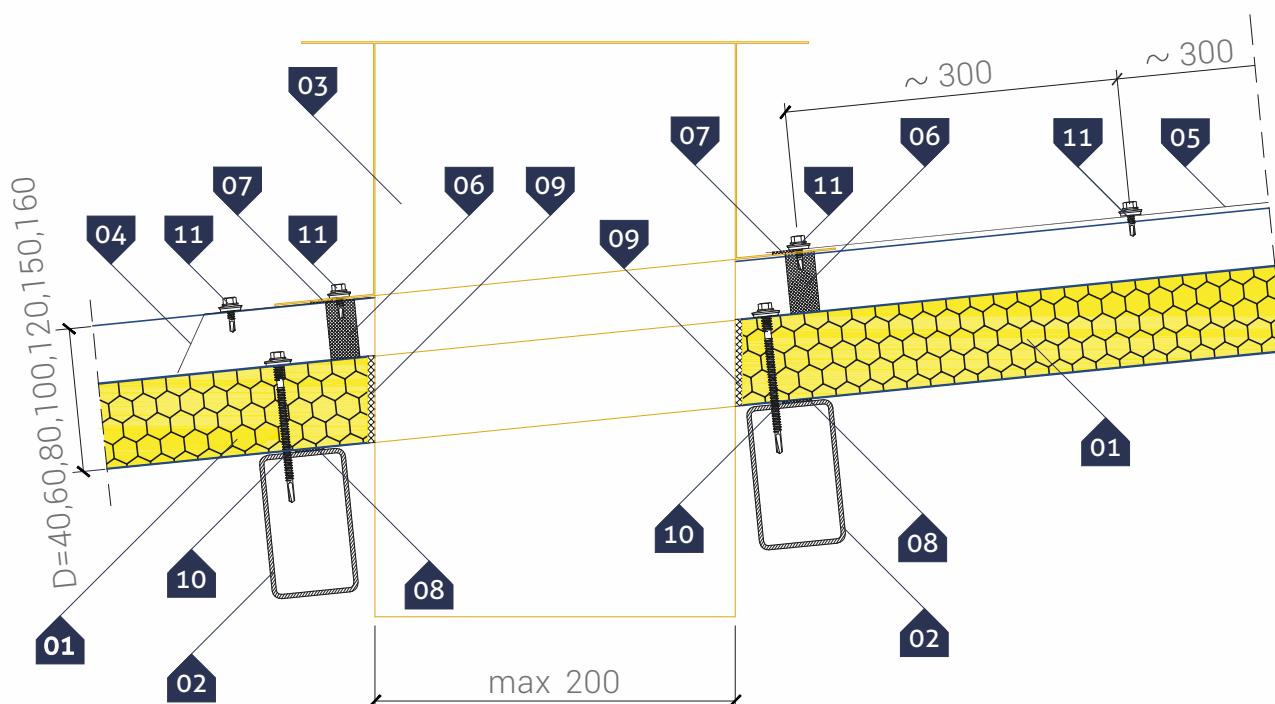
KEY:

- 01. GS PIR D roof panel
- 02. Skylight with base
- 03. Non-standard masking flashing
- 04. Polyethylene, self-adhesive sealing tape (PES)*
- 05. Polyurethane caulking foam
- 06. Self-drilling connector with a hex head for steel sheets
- 07. Butyl sealing compound

* - a recommended item

GS PIR D roof sandwich panel (Roof fastener)

Detail of ventilation duct (max. $\varnothing = 250$) penetration through roof



KEY:

- 01. GS PIR D roof panel
- 02. Supporting structure (if necessary for strength reasons)
- 03. Wind-driven roof vent base (mounted in the centre of a panel)
- 04. Profiled flashing **OB-28**
- 05. Individual flashing at roof ridge flashing
- 06. Profiled seal (**PE**)
- 07. Butyl sealing compound
- 08. Polyethylene, self-adhesive sealing tape (**PES**)*
- 09. Self-drilling connector for sandwich panels
- 10. Self-drilling connector for steel sheet
- 11. Self-drilling connector with a hex head for steel sheets

* - a recommended item

Sandwich panel installation

- Damage free installation of sandwich panels with VIAVAC vacuum lifters



NOTE!

The following figures are illustrative and only show examples of machine configurations. Maximum load capacity of machines **Viavac = 1000 kg**. The machines have no restrictions on the length of the panel being lifted.

Use: for mounting roof and wall panels in vertical and horizontal layout.

The selection of a particular device from the **VIAVAC** offer depends on the type and extent of the material being lifted and the specificity of a specific installation. To eliminate the risk of damaging the panel during its transfer, always follow the instructions given by the appropriately trained technical department of the company dealing with the rental of **VIAVAC** machines. Therefore, please contact **VIAVAC** for detailed information on the selection of machines and instructions for specific installation.

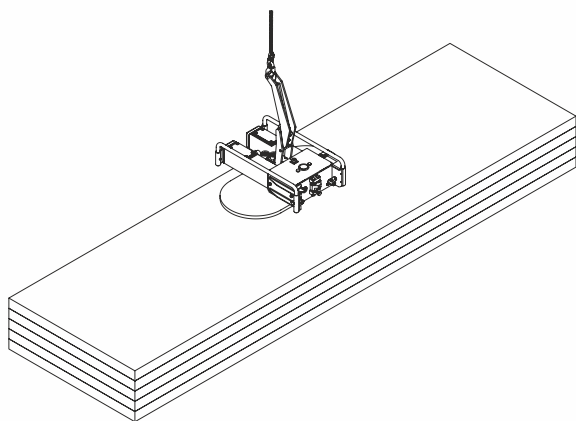
Contact:

tel. +48 68 384 39 08

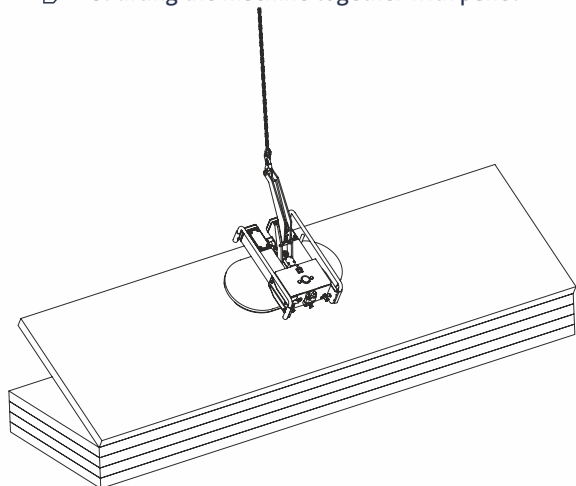
http: www.viavac.pl

Scheme No. 1. Horizontal installation of a wall panel using the **GlassBoy** machine

- 1a. situating the machine and its attachment to the panel



- 1b. lifting the machine together with panel

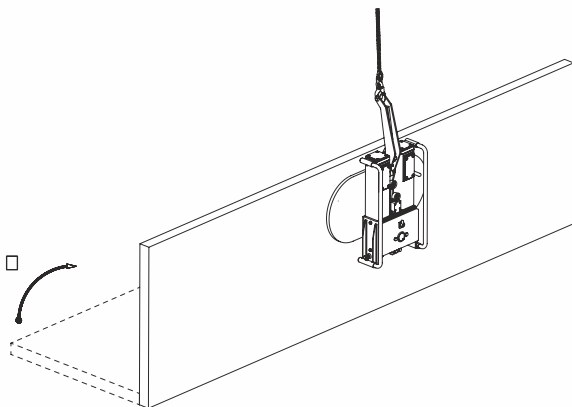


Sandwich panel installation

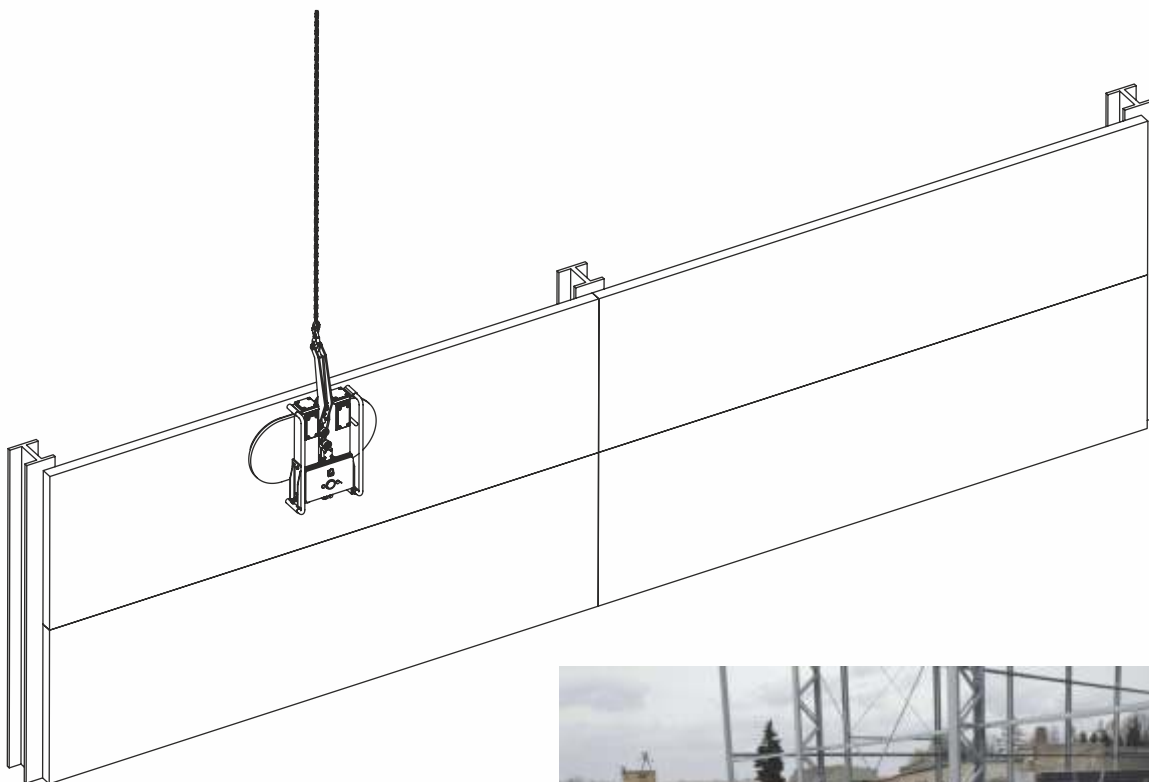
- Damage free installation of sandwich panels with VIAVAC vacuum lifters



- 1c. changing the angle of the machine and transporting the plate to the place of installation



- 1d. installation of panel on the wall and detachment of the machine



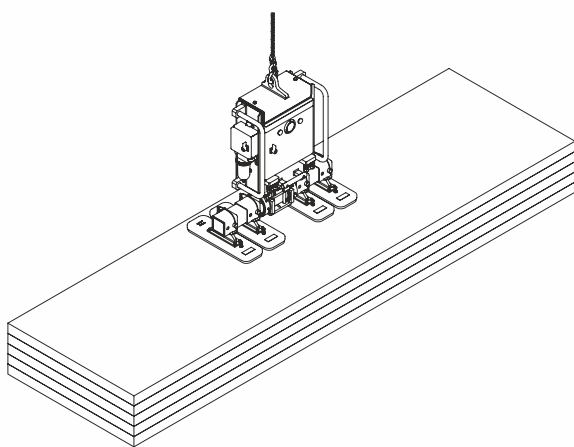
Sandwich panel installation

- Damage free installation of sandwich panels with VIAVAC vacuum lifters

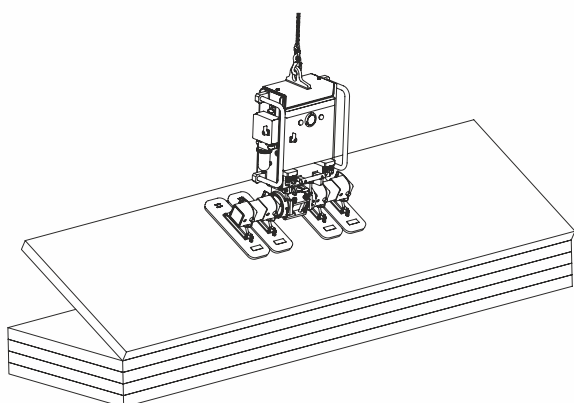


▷ **Scheme No. 2.** Horizontal installation of a wall panel using the **CladBoy** machine

- ▷ **2a.** situating the machine and its attachment to the panel



- ▷ **2b.** lifting the machine together with panel

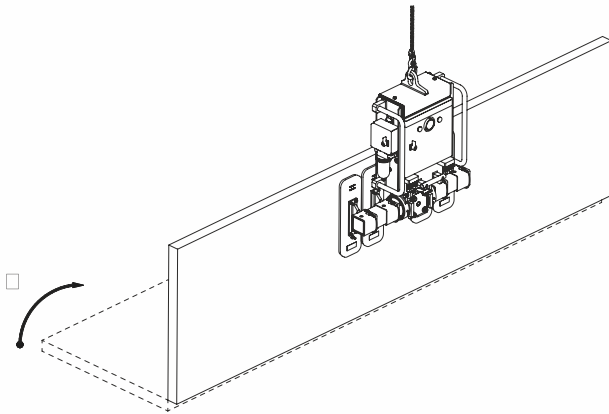


Sandwich panel installation

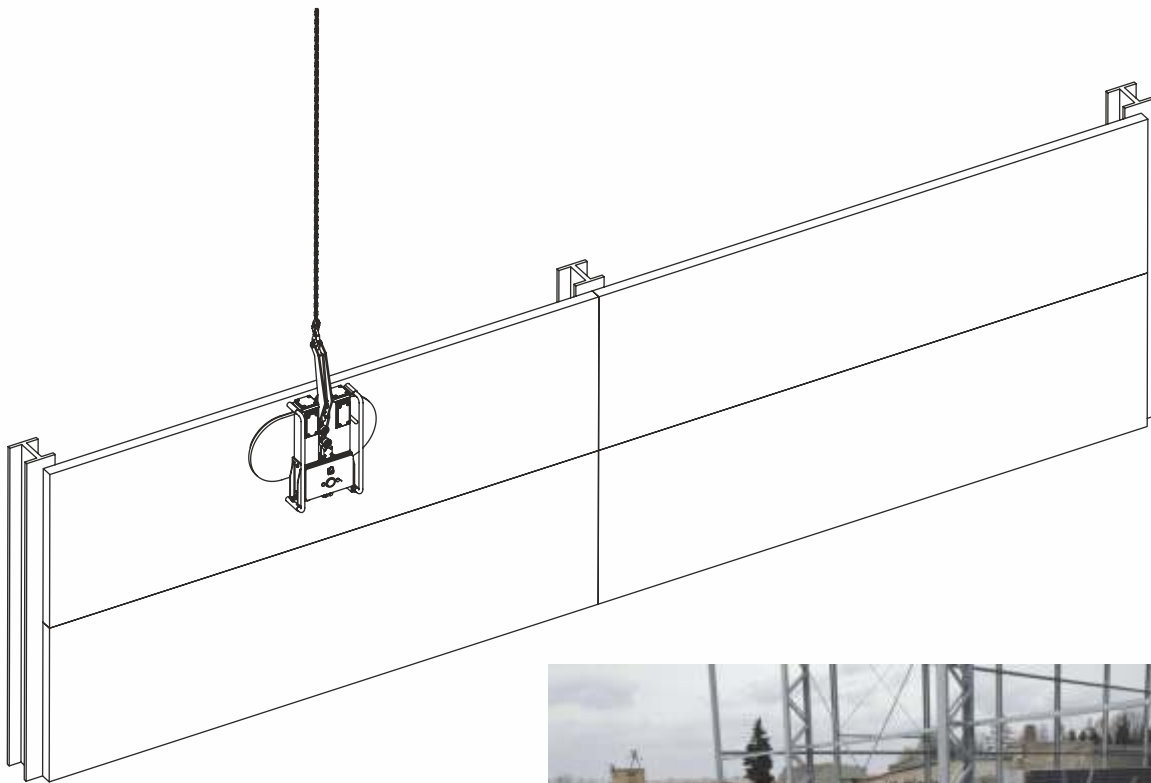
- Damage free installation of sandwich panels with VIAVAC vacuum lifters



- 2c. change of the angle of the machine and transporting the panel to the place of installation



- 2d. installation of panel on the wall and detachment of the machine

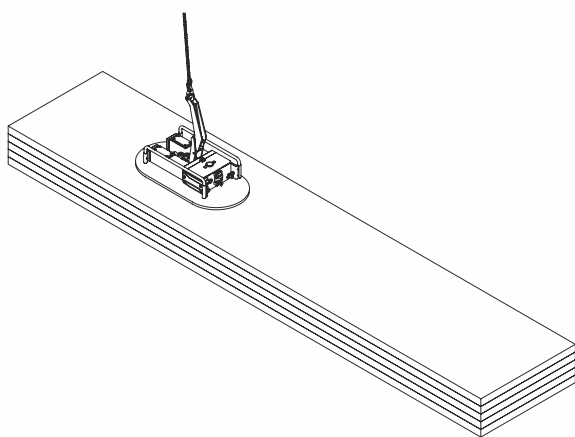


Sandwich panel installation

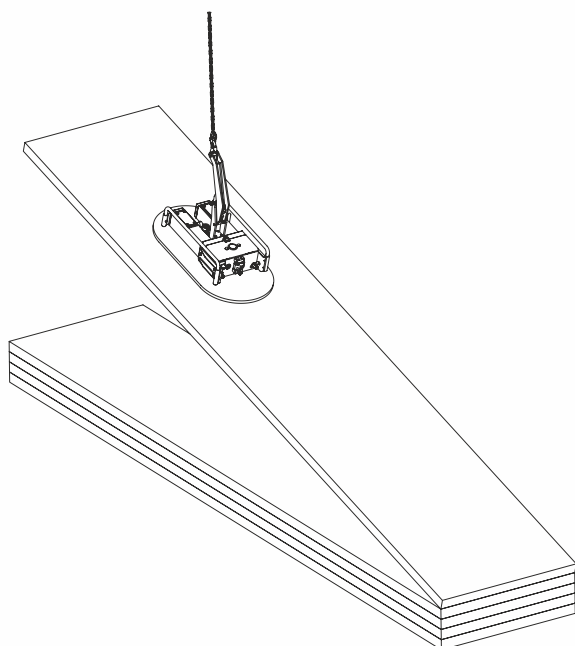
- Damage free installation of sandwich panels with VIAVAC vacuum lifters

▷ **Scheme No. 3.** Vertical installation of a wall panel using the GlassBoy machine

▷ **3a.** situating the machine and its attachment to the panel



▷ **3b.** lifting the machine together with panel

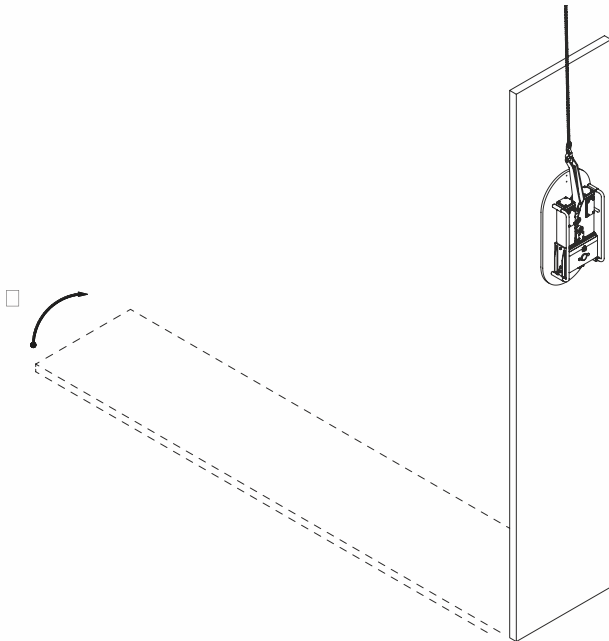


Sandwich panel installation

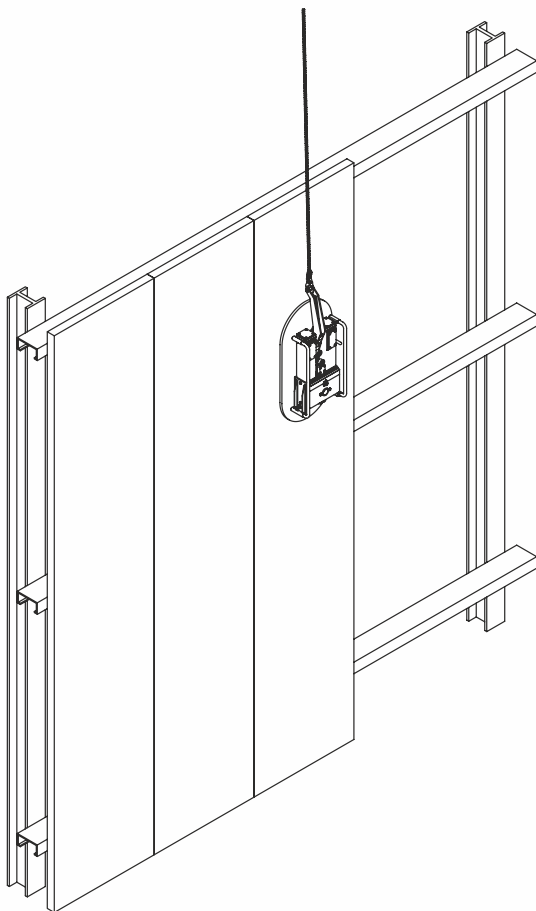
- Damage free installation of sandwich panels with VIAVAC vacuum lifters



- 3c. changing the angle of the machine and transporting to the place of assembly



- 3d. installation of panel on the wall and detachment of the machine



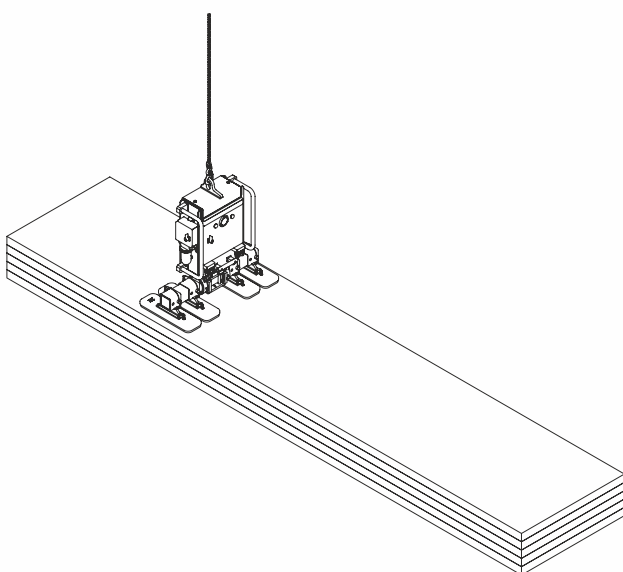
Sandwich panel installation

- ▷ Damage free installation of sandwich panels with VIAVAC vacuum lifters

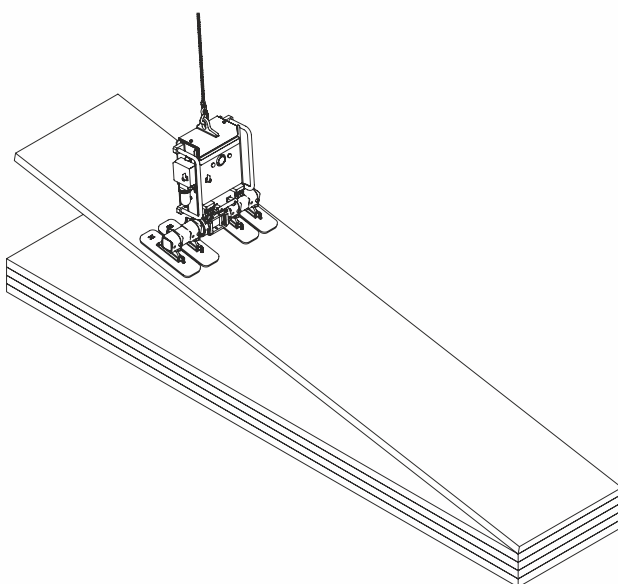


▷ **Scheme No. 4.** Vertical installation of a wall panel using the **CladBoy** machine

- ▷ **4a.** situating the machine and its attachment to the panel



- ▷ **4b.** lifting the machine together with panel

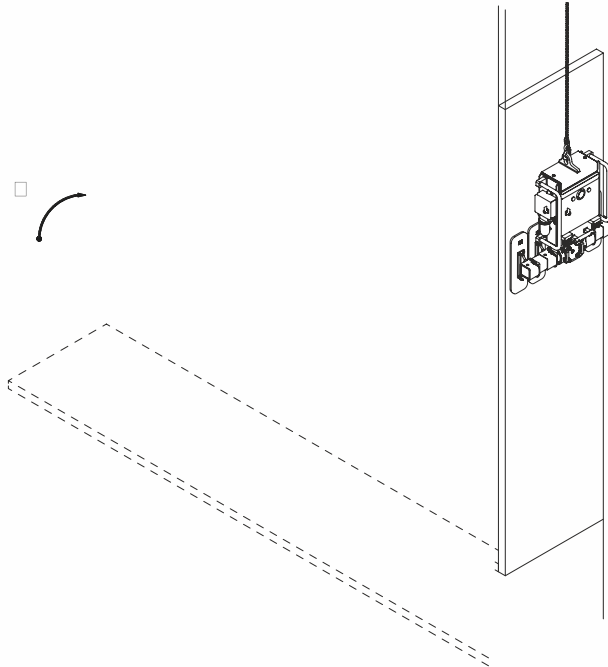


Sandwich panel installation

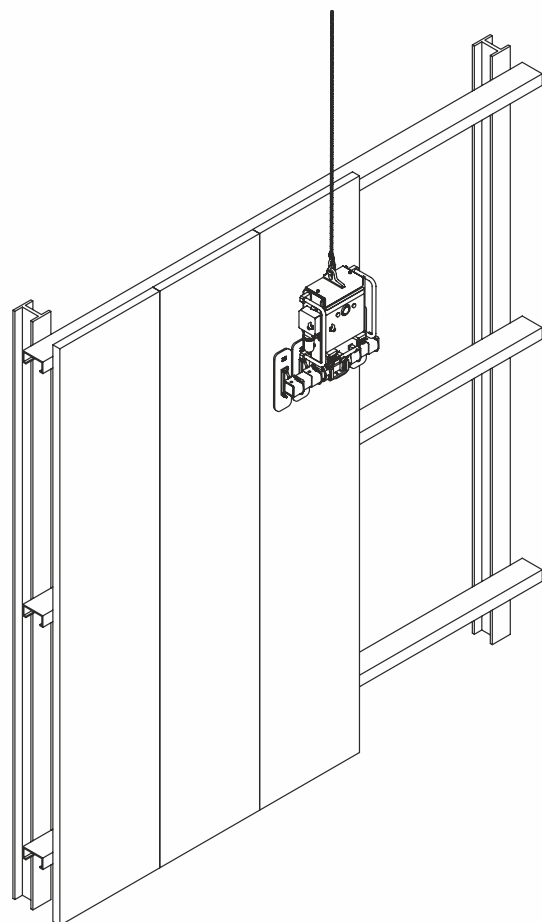
- Damage free installation of sandwich panels with VIAVAC vacuum lifters



- 4c. change of the angle of the machine and transporting the panel to the place of installation



- 4d. installation of panel on the wall and detachment of the machine

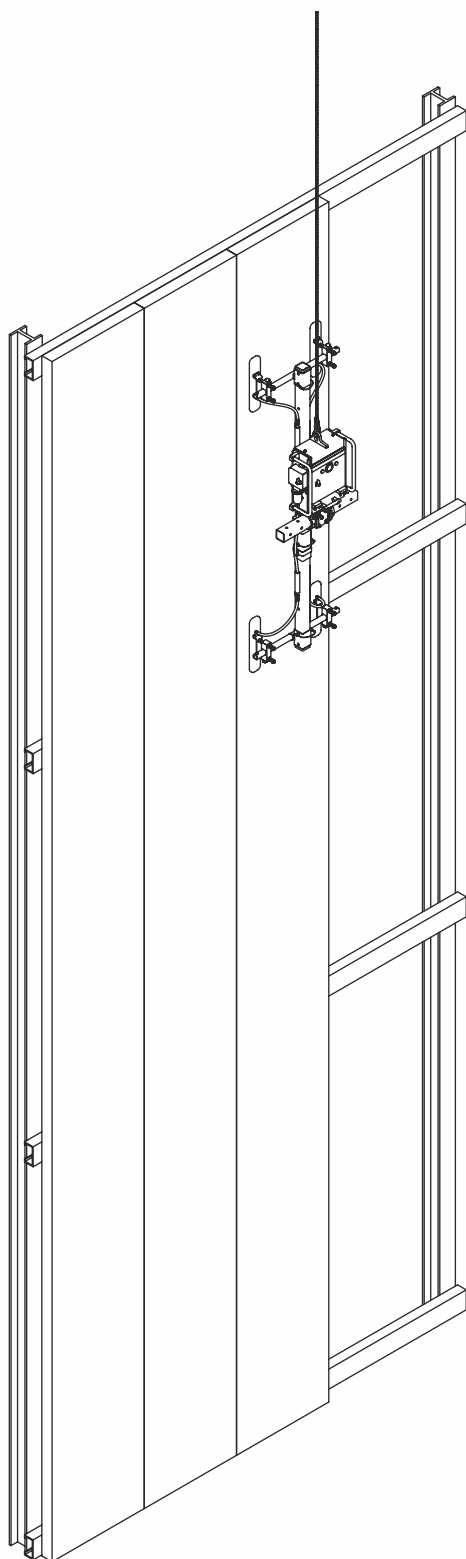


Sandwich panel installation

- ▷ Damage free installation of sandwich panels with VIAVAC vacuum lifters



- ▷ **Scheme No. 5.** Sample configuration of **CladBoy** machine for vertical installation of long panels

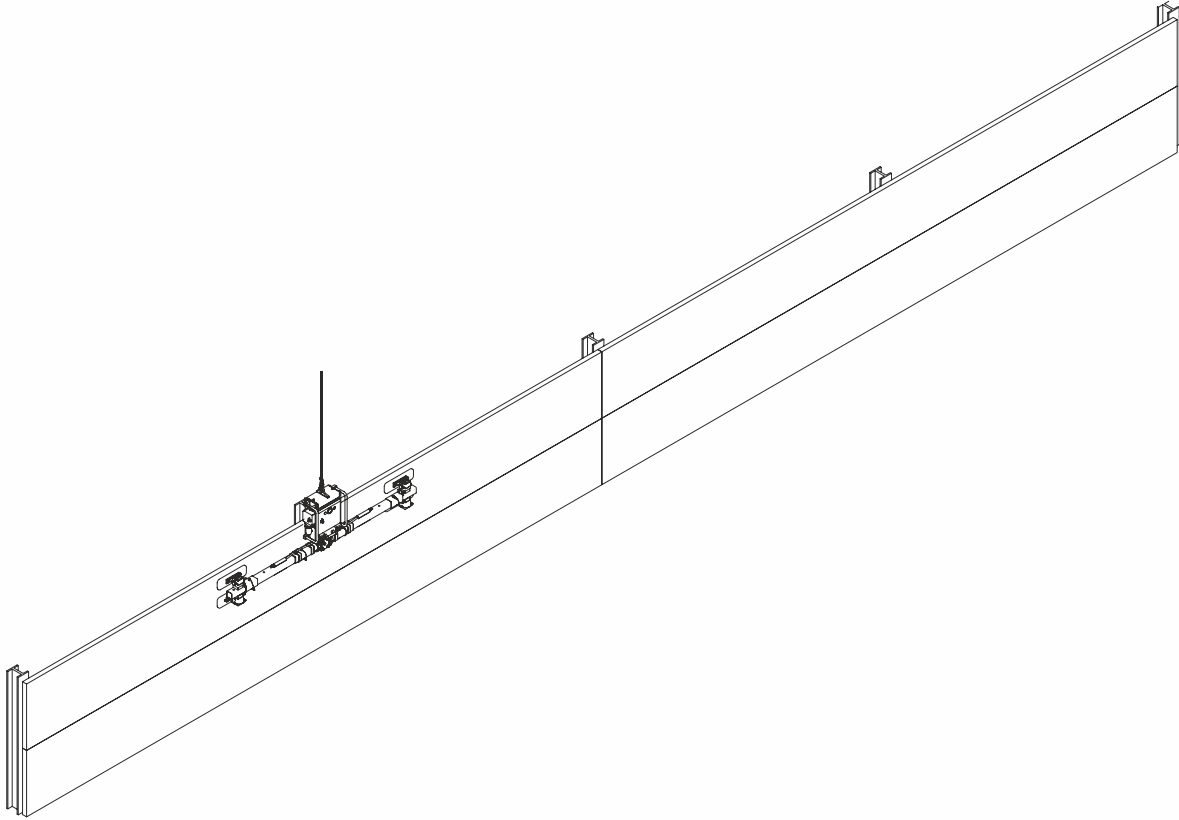


Sandwich panel installation

- ▷ Damage free installation of sandwich panels with VIAVAC vacuum lifters



- ▷ **Scheme No. 6.** Sample configuration of **CladBoy** machine for horizontal installation of long panels



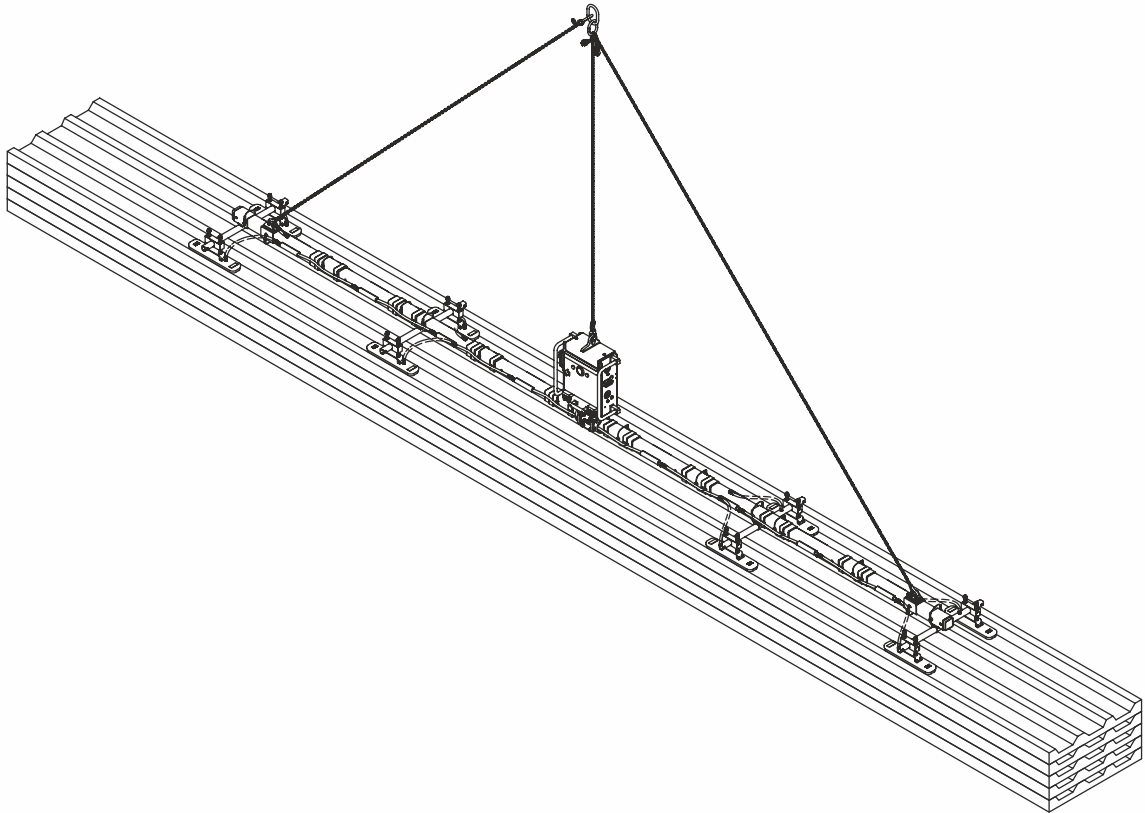
Sandwich panel installation

- ▷ Damage free installation of sandwich panels with VIAVAC vacuum lifters



▷ Scheme No. 7. Installation of a roof panel using CladBoy machine

- ▷ 7a. situating the machine and its attachment to the panel

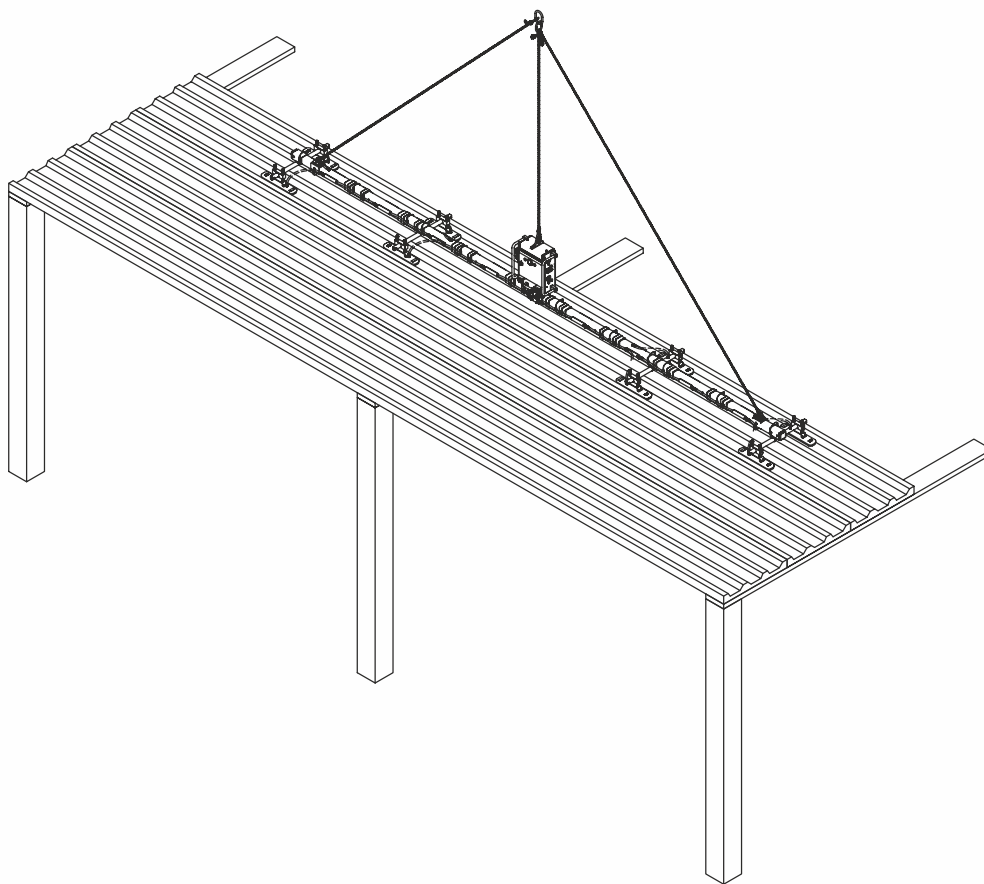


Sandwich panel installation

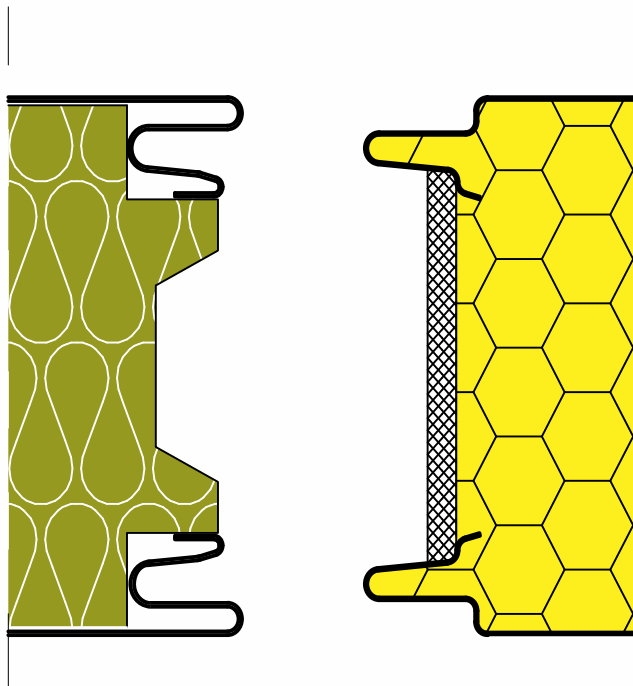
- Damage free installation of sandwich panels with VIAVAC vacuum lifters



- **7b.** installation of panel on the roof and detachment of the machine



1. Connecting the GS MW groove with the GS insPIRe tongue



Draw no. 1. Comparison of combined locks.

Due to the difference in the shape of the locks, it is recommended additional assembly steps are taken to ensure proper tightness of the connection.

1.1. Laying a strip of mineral wool in the groove of the GS MW panel



Photo. No. 1. GS MW panel groove with a mineral wool strip laid.

As a supplement to the lock, it is allowed to use mineral glass wool, cut to the appropriate size on the construction site. Recommended widths are shown in the table below.

Recommended widths of an additional strip of mineral wool				
Type of plate GS MW	CH 100	CH 120	CH 160	CH 200
width of the belt of mineral wool	35 mm	55 mm	95 mm	135 mm

To fix the wool strip in the groove, it is recommended to use double-sided adhesive tape applied on the construction site.

ATTENTION:

- when installed horizontally, it is allowed to replace mineral wool with low-pressure polyurethane foam

◇ 1.2. Installation of the GS insPIRe plate Photo.

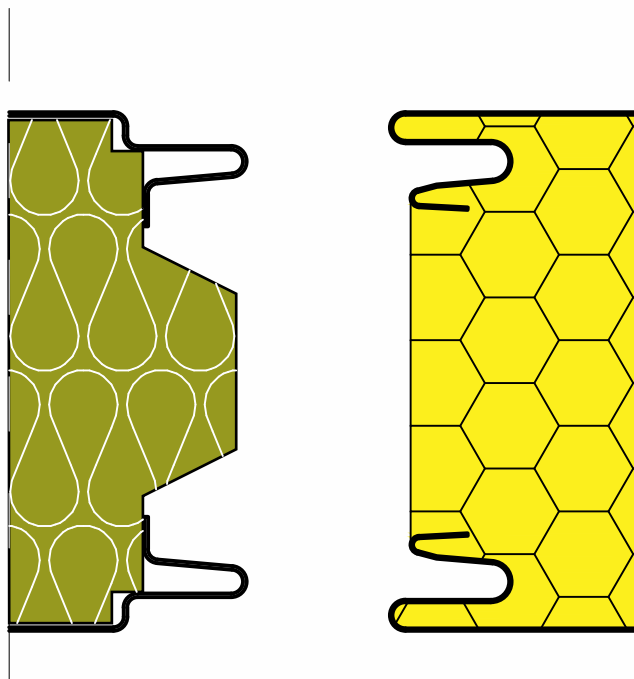


Photo. No. 2. View of the connection (overview)



Photo. No. 3. View of the connection (final version)

▷ 2. Connecting the GS insPIRe groove with a GS MW tongue



Draw no. 2. Comparison of combined locks

Due to the difference in the shapes of the locks, it is necessary to perform additional assembly steps to ensure proper tightness of the connection.

▷ 2.1. Removal of the GS MW plate tongue



Photo. No. 3. Suggested way to remove the GS MW plate tongue



Photo. No. 3. PSuggested way to remove the GS MW plate tongue

acceptable ways of removing the tongue:

- manually, with a wallpaper knife,
- mechanically, using an electric milling machine

2.2. Smoothing the surface of the GS MW lock after removing the tongue



Photo. No. 5.

The treatment of "smoothing" the surface of the GS MW lock

After the tongue is removed, smooth the surface of the zipper with a light sandpaper. Particular attention should be paid during this treatment to prevent cavities in the surface of the core and no damage to the varnish coating of the board's cladding.



Photo. No. 5.

View of the lock after "smoothing"

2.2. Smoothing the surface of the GS MW lock after removing the tongue



Photo. No. 7.

Connection view (final version)

▷ ACCESSORIES

The supplementation of the lightweight housing system from sandwich panels is made of flashings, fasteners and sealing tapes.

▷ FLASHINGS

Gór-Stal is equipped with a profiler able to produce steel sheet flashings up to **1,0 mm** thick and **6,0 m** long, in catalogue-typical or custom-made shapes. Available thicknesses and standard colours of the sheets are provided in the table below. The flashings are secured for transportation by means of foiling the external layer.

ATTENTION:

- it is recommended that the flashing be fastened every 30 cm with self-drilling screws to steel sheets or rivets
- possible length of non-standard flashings every 0.5 m in the range of available lengths

Sheet thickness [mm]	Sheet weight [kg/m ²]	Length of standard flashings [m]	Available length of flashings [m]	Sheet standard RAL colours
0,50	4,00	3,0 i 6,0	2,0 - 6,0	3000, 5010, 6011, 7016, 7035, 8017, 9002, 9006, 9007, 9010
0,70	6,00			
1,00	8,00			zinc coating

▷ SEALS

We supply sealing tapes presented in the technical solutions of this catalogue, as well as in other dimensions on the client's request: self-adhesive polyurethane (**PUS, PURS**), polyethylene (**PES**) and butyl.

▷ FASTENERS

Sandwich panels can be fastened to reinforced concrete, wooden and steel structures with use of appropriate connectors. System connectors are presented in tables below.

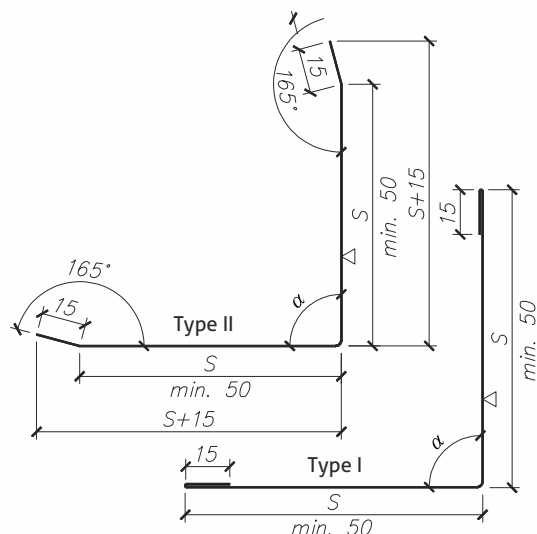
Connection	Connector dimensions [mm]
assembly of sandwich panels to steel and wooden structures	self-drilling screw with spacers – minimum length as per table below
assembly of sandwich panels to reinforced concrete structures	screws for concrete base with seals 6,4 x 100-210
assembly of flashings to sandwich panel	screw 4,8 x 20/ 4,2x16
	rivet 4,0 x 8,0
installation of flashings for thin-walled structures inside the facility	screw 4,8 x 19-25
	blind rivet 4,8 x 15,1
aesthetic finish	caps in panel colour

Sandwich panel type and thickness [mm]		Connector dimensions* [mm]
wall panel S	40	screw 5,5/6,4 x 65-100
	60	screw 5,5/6,4 x 85-120
	80	screw 5,5/6,4 x 110-140
	100	screw 5,5/6,4 x 125-155
	120	screw 5,5/6,4 x 140-180
wall panel U	60	screw 5,5/6,4 x 65-100
	80	screw 5,5/6,4 x 85-110
	100	screw 5,5/6,4 x 110-135
	120	screw 5,5/6,4 x 125-155
	140	screw 5,5/6,4 x 150-190
roof panel D	40/80	screw 5,5/6,4 x 110-135
	60/100	screw 5,5/6,4 x 125-155
	80/120	screw 5,5/6,4 x 150-190
	100/140	screw 5,5/6,4 x 175-190
	120/160	screw 5,5/6,4 x 200-215
	150/190	screw 5,5/6,4 x 225-260
	160/200	screw 5,5/6,4 x 225-260

* Necessary length of fastener depends on the structure thickness (details from Sales Representative)

Flashing OB-01 outer corner

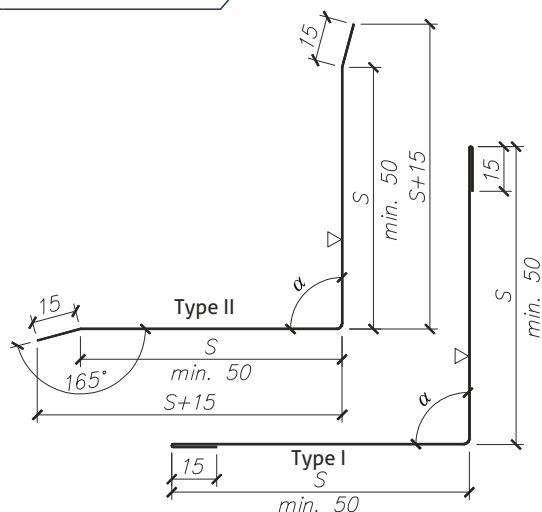
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-01/50	50	90	6000	3,12
02	OB-01/75	75			4,32
03	OB-01/100	100			5,52
04	OB-01/150	150			7,92
05	OB-01/200	200			10,32
06	OB-01/250	250			12,72
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
07	OB-01/ S=..... / α = / L=				
08	OB-01/ S1=..... / S2=..... / α = / L=				



The use is described in detail on page 68

Flashing OB-02 inner corner

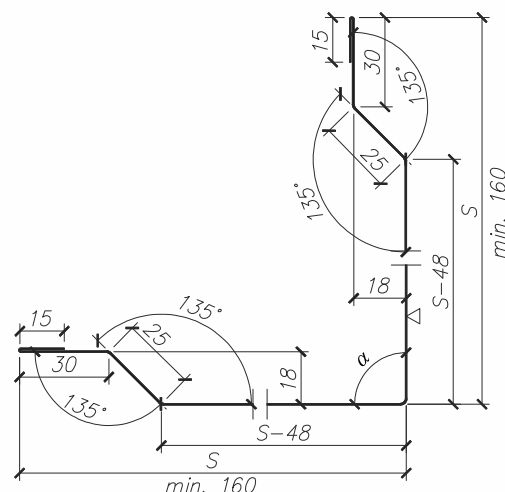
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-02/50	50	90	6000	3,12
02	OB-02/75	75			4,32
03	OB-02/100	100			5,52
04	OB-02/150	150			7,92
05	OB-02/200	200			10,32
06	OB-02/250	250			12,72
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
07	OB-02/ S=..... / α = / L=				
08	OB-02/ S1=..... / S2=..... / α = / L=				



The use is described in detail on page 19

Flashing OB-03 outer corner, covering connectors

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-03/160	160	90	6000	8,74
02	OB-03/180	180			9,70
03	OB-03/200	200			10,66
04	OB-03/220	220			11,62
05	OB-03/240	240			12,58
06	OB-03/260	260			13,54
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
07	OB-03/ S=..... / α = / L=				
08	OB-03/ S1=..... / S2=..... / α = / L=				



The use is described in detail on page 18

Additional elements

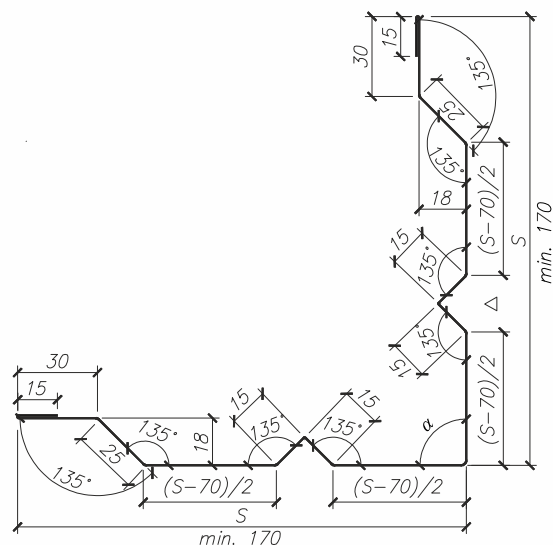
Catalogue of flashings

Flashing OB-03a outer corner, covering connectors (alternative for OB-03)

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-03a/180	180	90	6000	10,08
02	OB-03a/200	200			11,04
03	OB-03a/220	220			12,00
04	OB-03a/240	240			12,96
05	OB-03a/260	260			13,92
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
06	OB-03a/ S=..... / α = / L=				
07	OB-03a/ S1=..... / S2=..... / α = / L=				

NOTE:

Not described angles should be made as a right angle.



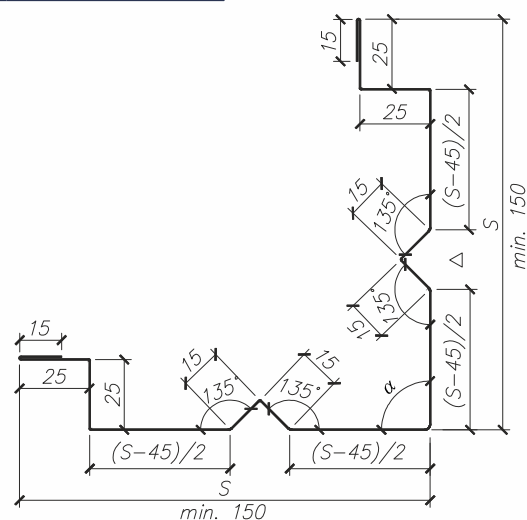
The use is described in detail on page 18

Flashing OB-03b outer corner, covering connectors (alternative for OB-03)

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-03b/160	160	90	6000	10,08
02	OB-03b/180	180			11,04
03	OB-03b/200	200			12,00
04	OB-03b/220	220			12,96
05	OB-03b/240	240			13,92
06	OB-03b/260	260			14,88
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
07	OB-03b/ S=..... / α = / L=				
08	OB-03b/ S1=..... / S2=..... / α = / L=				

NOTE:

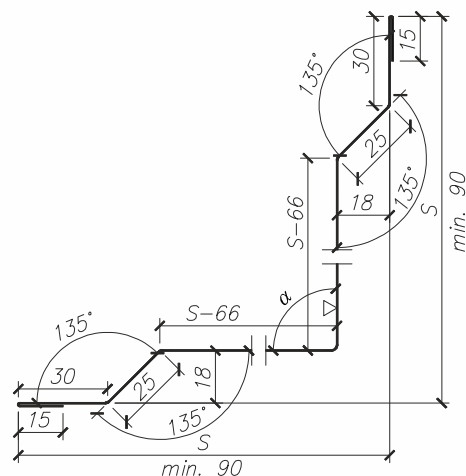
Not described angles should be made as a right angle.



The use is described in detail on page 18

Flashing OB-04 inner corner, covering connectors

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-04/100	100	90	6000	4,99
02	OB-04/120	120			5,95
03	OB-04/150	150			7,39
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
04	OB-04/ S=..... / α =..... / L=.....				
05	OB-04/ S1=..... / S2=..... / α =..... / L=.....				



The use is described in detail on page -

Additional elements

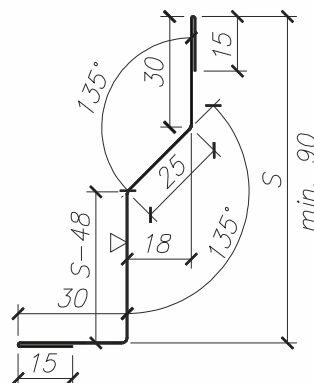
▢ Catalogue of flashings

▢ Flashing OB-05 inner corner, covering at flooring

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-05/90	90	-	6000	3,77
02	OB-05/120	120			4,49
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
03	OB-05/ S=..... / L=				

NOTE:

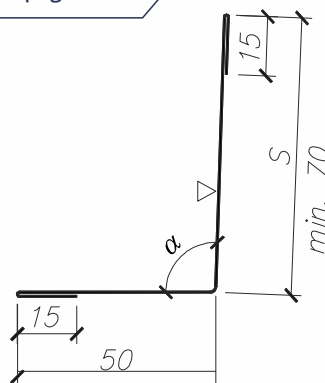
Not described angles should be made as a right angle.



The use is described in detail on page 16

▢ Flashing OB-06 inner corner, covering at flooring

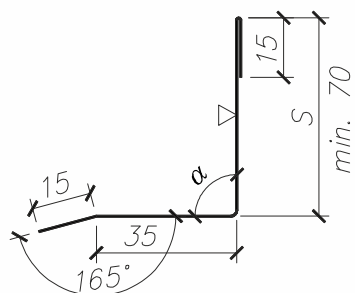
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-06/70	70	92	6000	3,60
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
02	OB-06/ S=..... / α = / L=				



The use is described in detail on page 28

▢ Flashing OB-07 covering corner

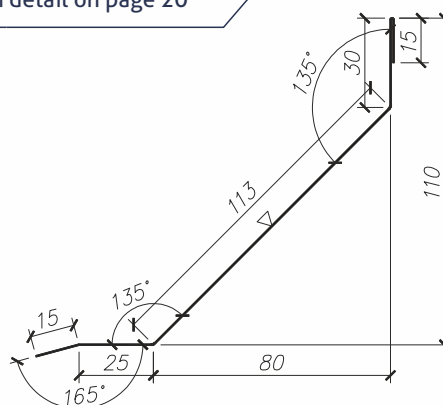
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-07/70	70	90	6000	3,24
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
02	OB-07/ S=..... / α = / L=				



The use is described in detail on page 20

▢ Flashing OB-08 inner corner, covering at grade beam

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-08	-	-	6000	4,75



The use is described in detail on page 14

Additional elements

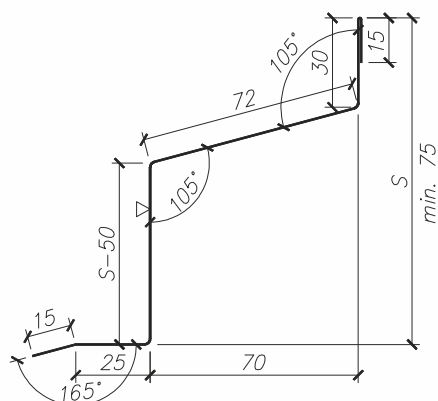
▢ Catalogue of flashings

▢ Flashing OB-09 inner corner, covering at grade beam

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-09/110	110	-	6000	5,21
02	OB-09/150	150			6,17
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
03	OB-09/ S=..... / L=				

NOTE:

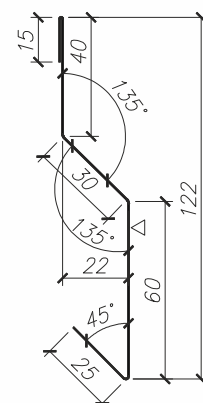
Not described angles should be made as a right angle.



The use is described in detail on page 50

▢ Flashing OB-10 narrow wall drip edge

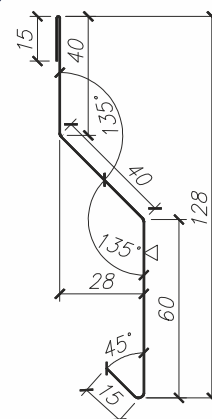
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-10	-	-	6000	4,08



The use is described in detail on page 14

▢ Flashing OB-11 wide wall drip edge

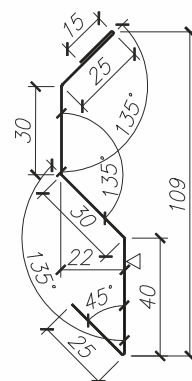
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-11	-	-	6000	4,08



The use is described in detail on page 26

▢ Flashing OB-12 wall drip edge

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-12	-	-	6000	3,96



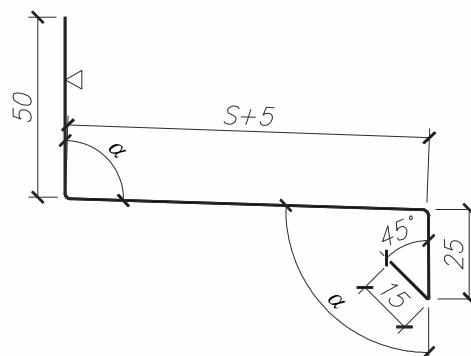
The use is described in detail on page 101

Additional elements

► Catalogue of flashings

► Flashing OB-13 plinth drip tray

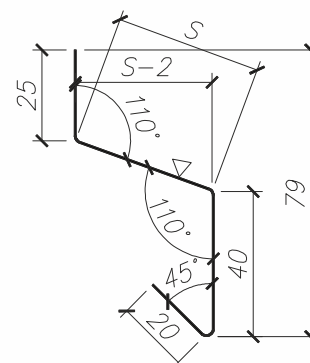
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-13/60	60	92	6000	3,72
02	OB-13/80	80			4,20
03	OB-13/100	100			4,68
04	OB-13/120	120			5,16
05	OB-13/140	140			5,64
06	OB-13/160	160			6,12
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
07	OB-13/ S=..... / α = / L=				



The use is described in detail on page 14

► Flashing OB-14 small plinth drip tray

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-14/30	30	-	6000	2,76
02	OB-14/40	40			3,00



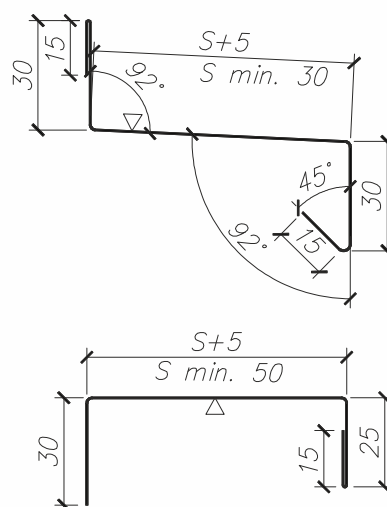
The use is described in detail on page 28

► Flashing OB-15 plinth drip tray with stiffening OB-15 + OB-15a

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-15/70	70	-	6000	3,96
02	OB-15/90	90			4,44
03	OB-15/110	110			4,92
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
04	OB-15/ S=..... / L=.....				
Standard – steel sheet 0,5 mm thick					
05	OB-15a/70	70	-	6000	3,48
06	OB-15a/90	90			3,96
07	OB-15a/110	110			4,44
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
08	OB-15a/ S=..... / L=.....				

NOTE:

Not described angles should be made as a right angle.



The use is described in detail on page 29

Additional elements

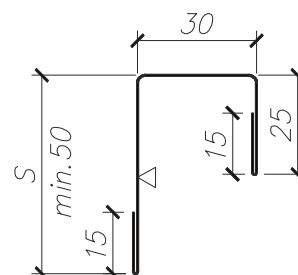
Catalogue of flashings

Flashing OB-16 under-gutter rigid flashing

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-16/50	50	-	6000	3,24
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
02	OB-16/ S=..... / L=				

NOTE:

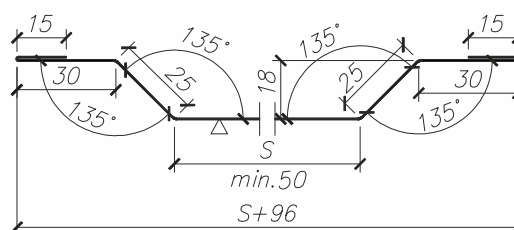
Not described angles should be made as a right angle.



The use is described in detail on page 24

Flashing OB-17 covering panels connection

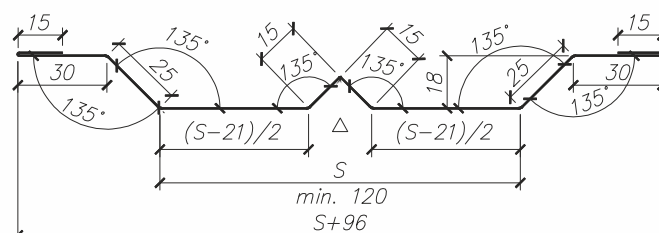
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-17/40	40	-	6000	4,32
02	OB-17/60	60			4,80
03	OB-17/80	80			5,28
04	OB-17/100	100			5,76
05	OB-17/120	120			6,24
06	OB-17/140	140			6,72
07	OB-17/160	160			7,20
08	OB-17/180	180			7,68
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
09	OB-17/ S=..... / L=				



The use is described in detail on page 21

Flashing OB-17a covering panels connection (alternative for OB-17)

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-17a/120	120	-	6000	6,46
02	OB-17a/140	140			6,94
03	OB-17a/160	160			7,42
04	OB-17a/180	180			7,90
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
05	OB-17a/ S=..... / L=				



NOTE:

Not described angles should be made as a right angle.

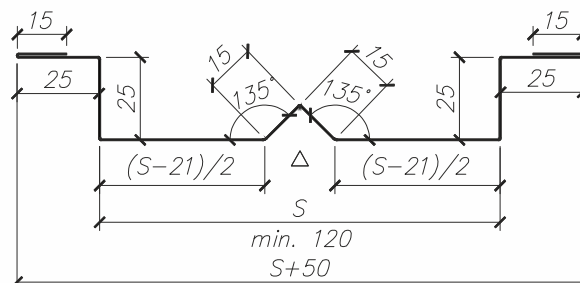
The use is described in detail on page 21

Additional elements

Catalogue of flashings

Flashing OB-17b covering panels connection (alternative for OB-17)

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-17b/120	120	-	6000	6,22
02	OB-17b/140	140			6,70
03	OB-17b/160	160			7,18
04	OB-17b/180	180			7,66
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
05	OB-17b/ S=..... / L=				



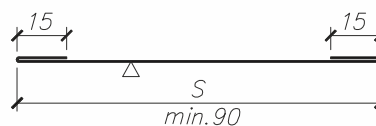
NOTE:

Not described angles should be made as a right angle.

The use is described in detail on page 21

Flashing OB-18 covering

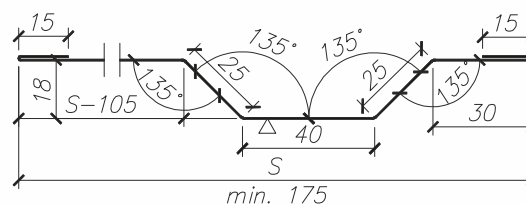
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet ,0,5 mm thick					
01	OB-18/90	90	-	6000	2,88
02	OB-18/100	100			3,12
03	OB-18/120	120			3,60
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
04	OB-18/ S=..... / L=				



The use is described in detail on page 70

Flashing OB-19 covering

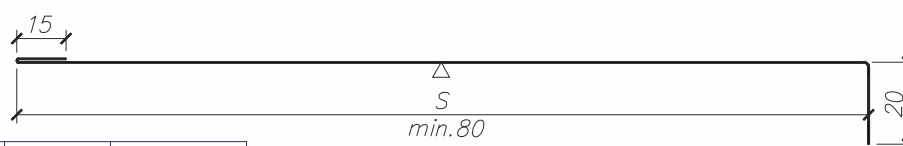
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-19/175	175	-	6000	5,28
02	OB-19/195	195			5,76
03	OB-19/215	215			6,24
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
04	OB-19/ S=..... / L=				



The use is described in detail on page 20

Flashing OB-20 covering door lintel

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
01	OB-20/ S=..... / L=.....				



NOTE:

Not described angles should be made as a right angle.

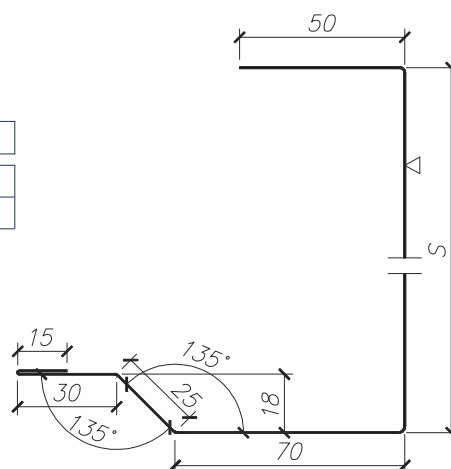
The use is described in detail on page 23

Flashing OB-21 covering door post

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
01	OB-21/ S=..... / L=.....				

NOTE:

Not described angles should be made as a right angle.



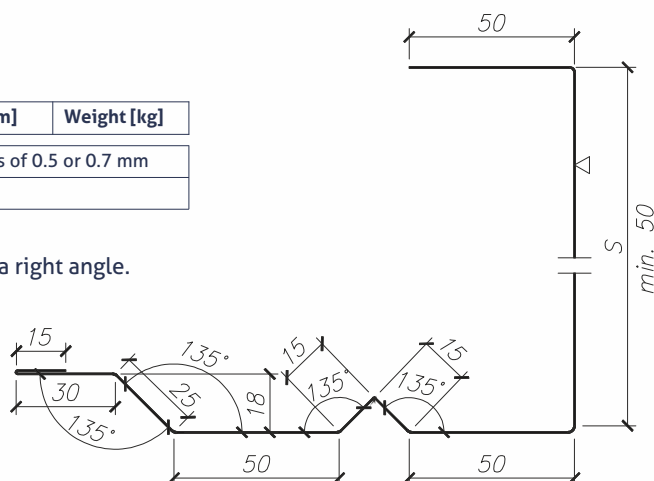
The use is described in detail on page 22

Flashing OB-21a covering door post (alternative for OB-21)

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
01	OB-21a/ S=..... / L=.....				

NOTE:

Not described angles should be made as a right angle.



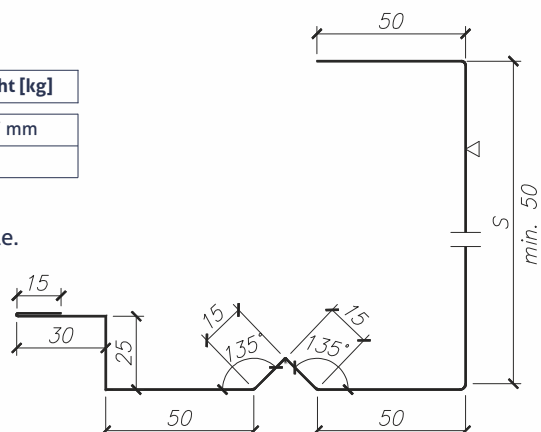
The use is described in detail on page 22

Flashing OB-21b masking junction of panels (alternative for OB-21)

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
01	OB-21b/ S=..... / L=.....				

NOTE:

Not described angles should be made as a right angle.

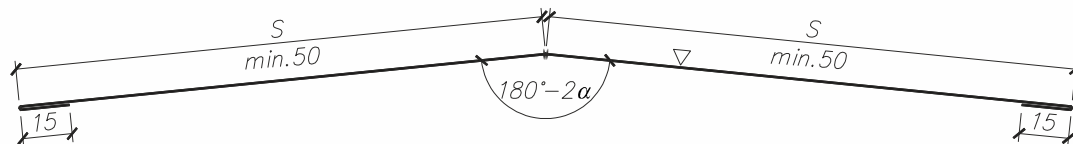


The use is described in detail on page 22

Additional elements

▢ Catalogue of flashings

▢ Flashing OB-22 top roof ridge

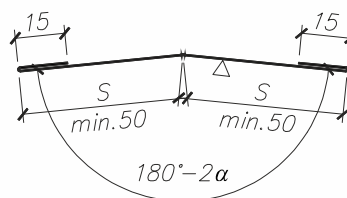


No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-22/160	160	according to the order	6000	8,40
02	OB-22/200	200			10,32
03	OB-22/250	250			12,72
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
04	OB-22/ S=..... / α= / L=				

The use is described in detail on page 88

▢ Flashing OB-23 bottom roof ridge

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-23/50	50	according to the order	6000	3,12
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
02	OB-23/ S=..... / α= / L=				



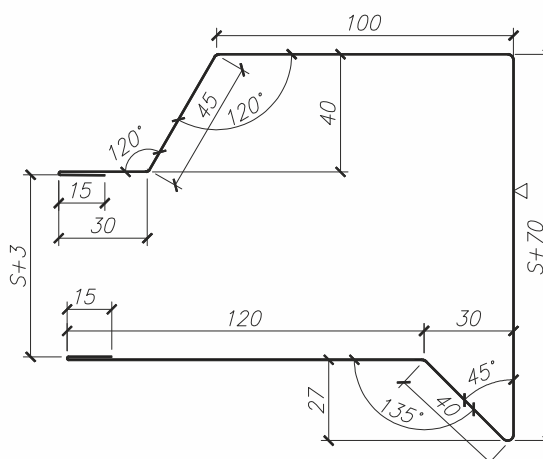
The use is described in detail on page 88

▢ Flashing OB-24 side drip edge

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-24/40	40	-	6000	11,64
02	OB-24/60	60			12,12
03	OB-24/80	80			12,60
04	OB-24/100	100			13,08
05	OB-24/120	120			13,56
06	OB-24/150	150			14,28
07	OB-24/160	160			14,52
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
08	OB-24/ S=..... / α= / L=				

NOTE:

Not described angles should be made as a right angle.



The use is described in detail on page 95

Additional elements

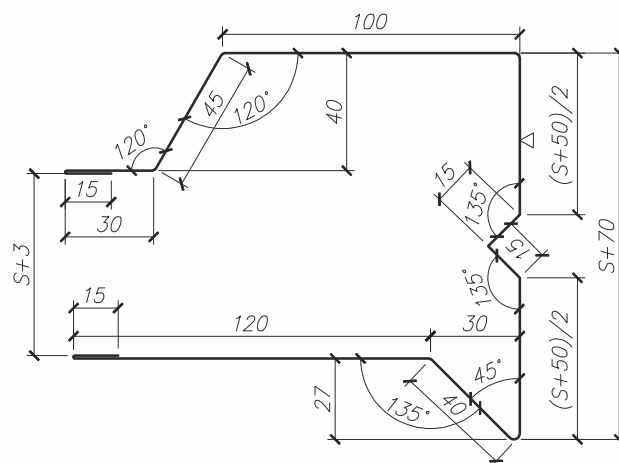
Catalogue of flashings

Flashing OB-24a side drip edge (alternative for OB-24)

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-24a/100	100	-	6000	13,32
02	OB-24a/120	120			13,80
03	OB-24a/150	150			14,52
04	OB-24a/160	160			14,76
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
05	OB-24a/ S=..... / α = / L=				

NOTE:

Not described angles should be made as a right angle.



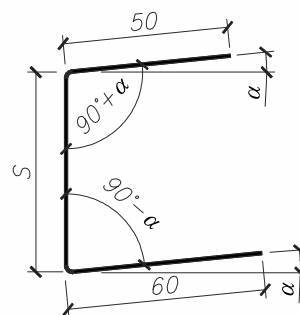
The use is described in detail on page 95

Flashing OB-25 under-gutter channel section

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 1,0 mm thick					
01	OB-25/40	40	according to the order	6000	7,20
02	OB-25/60	60			8,16
03	OB-25/80	80			9,12
04	OB-25/100	100			10,08
05	OB-25/120	120			11,04
06	OB-25/150	150			12,48
07	OB-25/160	160			12,96

NOTE:

For roofs with an inclination of $\alpha > 7^\circ$, an individual flashing plan is required.



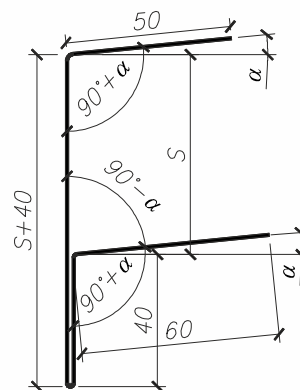
The use is described in detail on page 100

Flashing OB-25a under-gutter channel section (alternative for OB-25)

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 1,0 mm thick					
01	OB-25a/40	40	according to the order	6000	11,04
02	OB-25a/60	60			12,00
03	OB-25a/80	80			12,96
04	OB-25a/100	100			13,92
05	OB-25a/120	120			14,88
06	OB-25a/150	150			16,32
07	OB-25a/160	160			16,80

NOTE:

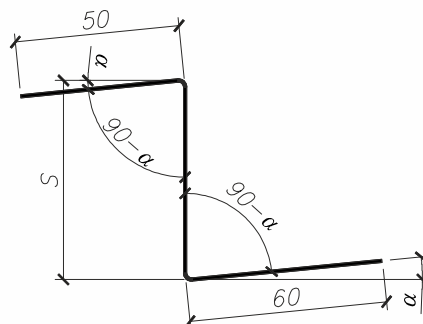
For roofs with an inclination of $\alpha > 7^\circ$, an individual flashing plan is required.



The use is described in detail on page 100

Flashing OB-26 under-gutter Z-bar

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 1,0 mm thick					
01	OB-26/40	40	according to the order	6000	7,20
02	OB-26/60	60			8,16
03	OB-26/80	80			9,12
04	OB-26/100	100			10,08
05	OB-26/120	120			11,04
06	OB-26/150	150			12,48
07	OB-26/160	160			12,96



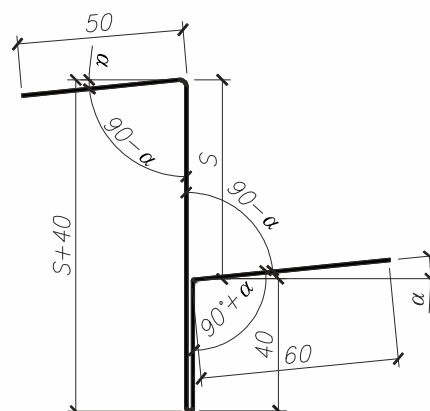
NOTE:

For roofs with an inclination of $\alpha > 7^\circ$, an individual flashing plan is required.

The use is described in detail on page 99

Flashing OB-26a under-gutter Z-bar (alternative for OB-26)

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 1,0 mm thick					
01	OB-26a/40	40	according to the order	6000	11,04
02	OB-26a/60	60			12,00
03	OB-26a/80	80			12,96
04	OB-26a/100	100			13,92
05	OB-26a/120	120			14,88
06	OB-26a/150	150			16,32
07	OB-26a/160	160			16,80



NOTE:

For roofs with an inclination of $\alpha > 7^\circ$, an individual flashing plan is required.

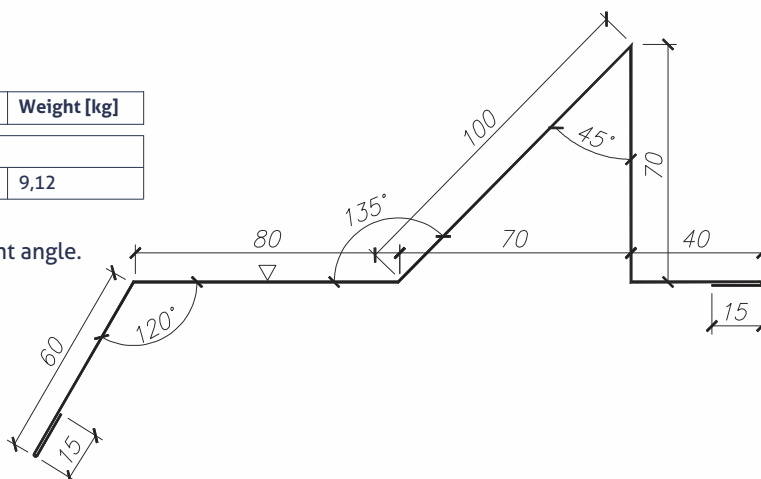
The use is described in detail on page 99

Flashing OB-27 snow barrier - drip edge

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-27	-	-	6000	9,12

NOTE:

Not described angles should be made as a right angle.



The use is described in detail on page 99

Additional elements

▢ Catalogue of flashings

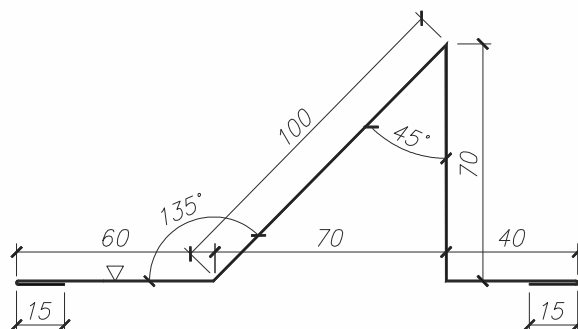
▢ Flashing OB-27a

roof snow barrier
(alternative for OB-27)

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-27a	-	-	6000	7,20

NOTE:

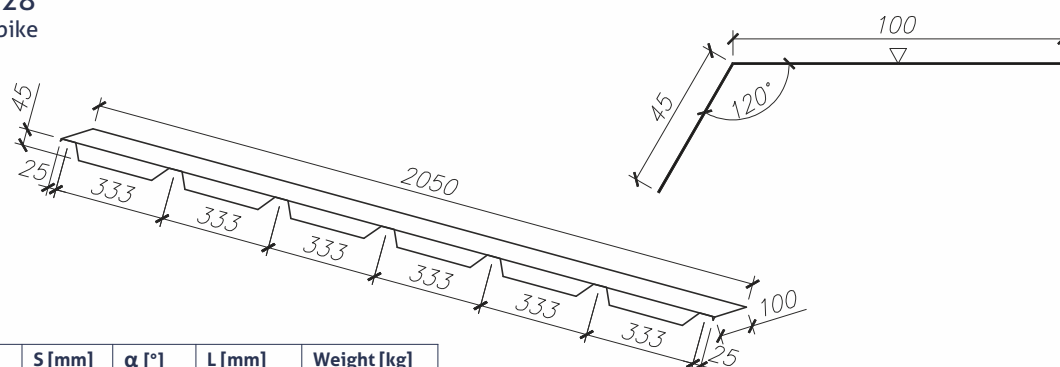
Not described angles should be made as a right angle.



The use is described in detail on page 99

▢ Flashing OB-28

roof ridge bird spike



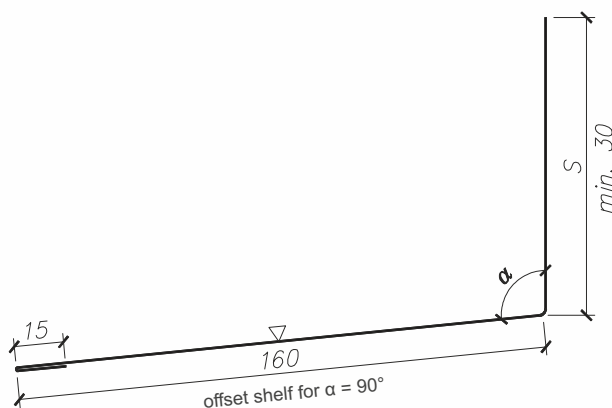
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-28	-	-	2050	1,19

The use is described in detail on page 90

▢ Flashing OB-29

roof covering flashing

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-29/100	100	according to the order	6000	6,60
02	OB-29/150	150			7,80
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
03	OB-29/ S=..... / α = / L=				



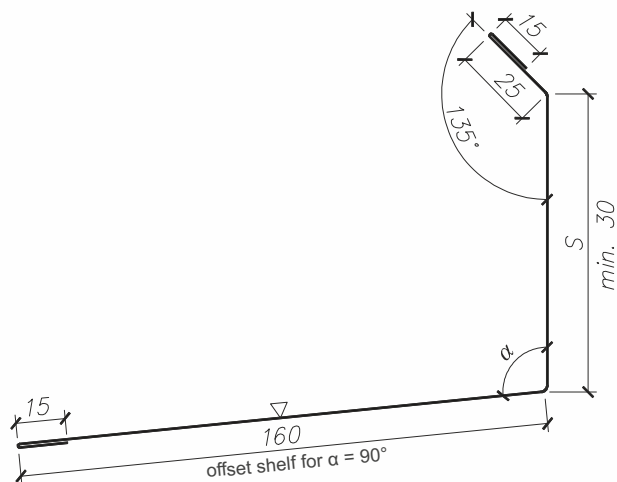
The use is described in detail on page 90

Additional elements

Catalogue of flashings

Flashing OB-30 roof covering flashing

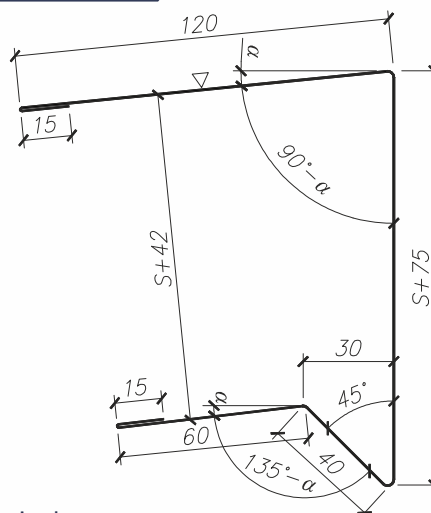
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-30/100	100	according to the order	6000	7,56
02	OB-30/150	150			8,76
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
03	OB-30/ S=..... / α = / L=				



The use is described in detail on page 101

Flashing OB-31 roof ridge

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-31/40	40	according to the order	6000	8,76
02	OB-31/60	60			9,24
03	OB-31/80	80			9,72
04	OB-31/100	100			10,20
05	OB-31/120	120			10,68
06	OB-31/150	150			11,40
07	OB-31/160	160			11,64
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
08	OB-31/ S=..... / α = / L=				



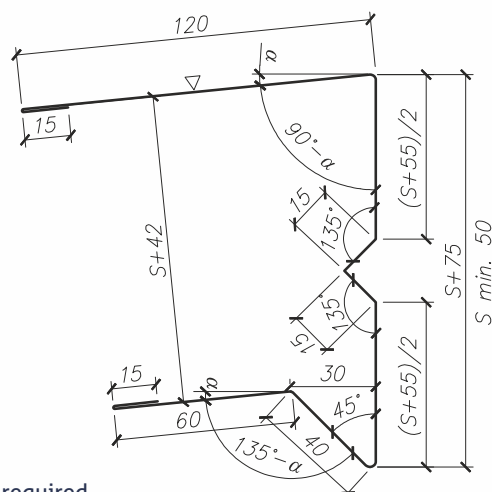
NOTE:

For roofs with an inclination of $\alpha > 7^\circ$, an individual flashing plan is required.

The use is described in detail on page 94

Flashing OB-31a roof ridge (OB-31 alternative)

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-31a/60	60	according to the order	6000	9,48
02	OB-31a/80	80			9,96
03	OB-31a/100	100			10,44
04	OB-31a/120	120			10,92
05	OB-31a/150	150			11,64
06	OB-31a/160	160			11,88
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
07	OB-31a/ S=..... / α = / L=				



NOTE:

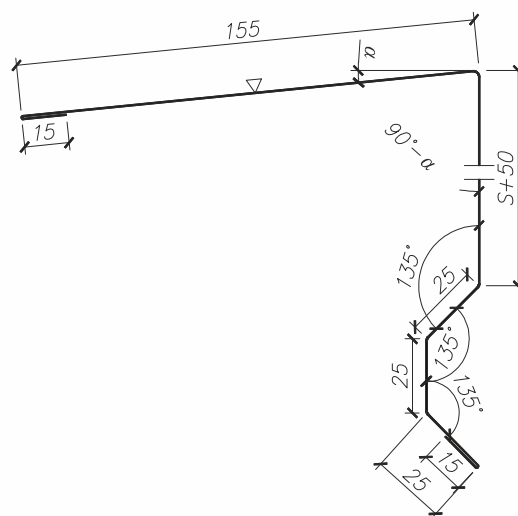
Not described angles should be made as a right angle.

For roofs with an inclination of $\alpha > 7^\circ$, an individual flashing plan is required.

The use is described in detail on page 94

Flashings OB-32
roof ridge

Lp.	symbol	S [mm]	α [°]	L [mm]	masa [kg]
Typowa z blachy o grubości 0,5 mm					
01	OB-32/40	40	according to the order	6000	8,40
02	OB-32/60	60			8,88
03	OB-32/80	80			9,36
04	OB-32/100	100			9,84
05	OB-32/120	120			10,32
06	OB-32/150	150			11,04
07	OB-32/160	160			11,28
Nietypowa z blachy o grubości 0,5 lub 0,7 mm					
08	OB-32/ S=..... / α = / L=				



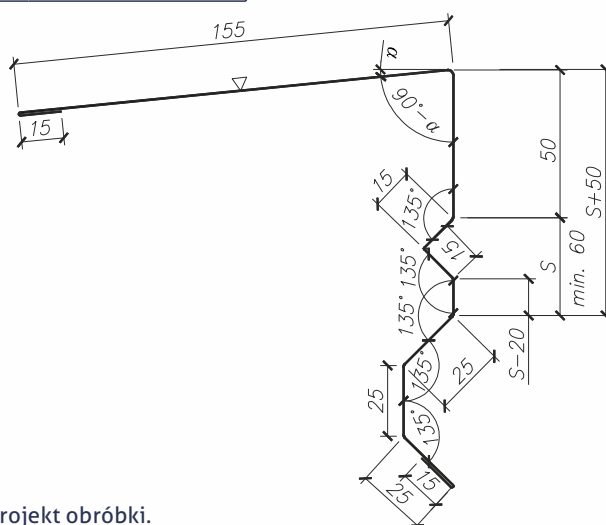
UWAGA:

Przy dachach o spadku $\alpha > 7^\circ$ konieczny jest indywidualny projekt obróbki.

The use is described in detail on page 93

Flashings OB-32a
roof ridge
(alternative for OB-32)

Lp.	symbol	S [mm]	α [°]	L [mm]	masa [kg]
Typowa z blachy o grubości 0,5 mm					
01	OB-32a/60	60	according to the order	6000	9,12`
02	OB-32a/80	80			9,60
03	OB-32a/100	100			10,08
04	OB-32a/120	120			10,56
05	OB-32a/150	150			11,28
06	OB-32a/160	160			11,52
Nietypowa z blachy o grubości 0,5 lub 0,7 mm					
07	OB-32a/ S=..... / α = / L=				



UWAGA:

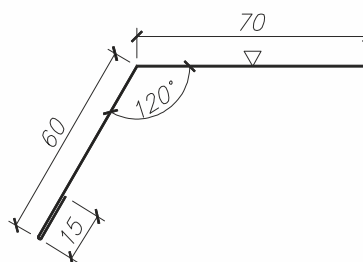
Nieopisane kąty należy wykonać jako proste.

Przy dachach o spadku $\alpha > 7^\circ$ konieczny jest indywidualny projekt obróbki.

The use is described in detail on page 93

Flashings OB-33
drip edge

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-33	-	-	6000	3,48
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
02	OB-33/ L=				



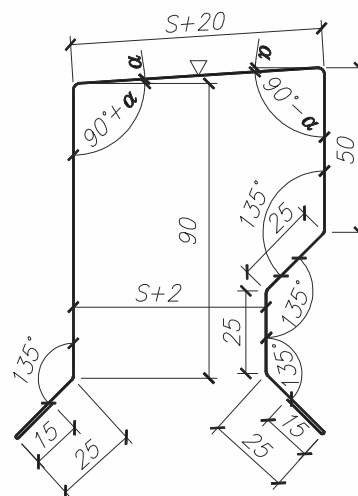
The use is described in detail on page 100

Additional elements

Catalogue of flashings

Flashing OB-34 attic wall - type I

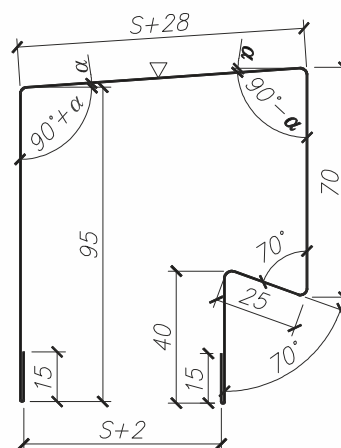
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-34/40	40	according to the order	6000	7,92
02	OB-34/60	60			8,40
03	OB-34/80	80			8,88
04	OB-34/100	100			9,36
05	OB-34/120	120			9,84
06	OB-34/140	140			10,32
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
07	OB-34/ S=..... / α = / L=				



The use is described in detail on page 90

Flashing OB-35 attic wall - type II

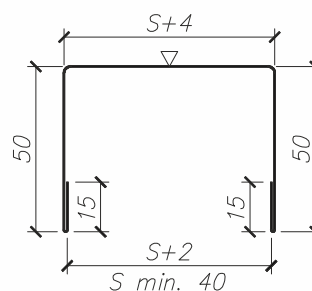
No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-35/40	40	according to the order	6000	7,87
02	OB-35/60	60			8,35
03	OB-35/80	80			8,83
04	OB-35/100	100			9,31
05	OB-35/120	120			9,79
06	OB-35/140	140			10,27
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
07	OB-35/ S=..... / α = / L=				



The use is described in detail on page 92

Flashing OB-36 U channel section

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-36/40	40	-	6000	4,18
02	OB-36/60	60			4,66
03	OB-36/80	80			5,14
04	OB-36/100	100			5,62
05	OB-36/120	120			6,10
06	OB-36/160	160			7,06
07	OB-36/200	200			8,02
Unusual from sheet metal with a thickness of 0.5 or 0.7 mm					
08	OB-36/ S=..... / L=				



NOTE:

Not described angles should be made as a right angle.

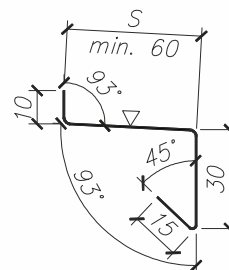
The use is described in detail on page -

Additional elements

Catalogue of flashings

Flashing OB-37 window cill

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 0,5 mm thick					
01	OB-37/60	60	-	6000	2,76
02	OB-37/80	80			3,24
03	OB-37/100	100			3,72
Unusual from sheet metal with a thickness of 0,5 or 0,7 mm					
04	OB-37/ S=...../ L=				



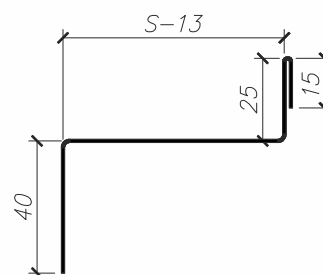
The use is described in detail on page 24

Flashing OB-38 edge bar for S panels

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 1,0 mm thick					
01	OB-38/60	60	-	6000	6,10
02	OB-38/80	80			7,06
03	OB-38/100	100			8,02

NOTE:

Not described angles should be made as a right angle.



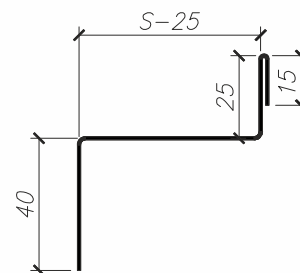
The use is described in detail on page 28

Flashing OB-39 edge bar for U panels

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 1,0 mm thick					
01	OB-39/60	60	according to the order	6000	5,52
02	OB-39/80	80			6,48
03	OB-39/100	100			7,44
04	OB-39/120	120			8,40
05	OB-39/140	140			9,36

NOTE:

Not described angles should be made as a right angle.



The use is described in detail on page 65

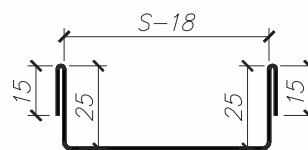
Flashing OB-40 starting

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 1,0 mm thick					
01	OB-40/60	60	-	6000	5,86
02	OB-40/80	80			6,82
03	OB-40/100	100			7,78
04	OB-40/120	120			8,74
05	OB-40/160	160			10,66
06	OB-40/200	200			12,58

NOTE:

Not described angles should be made as a right angle.

The use is described in detail on page -

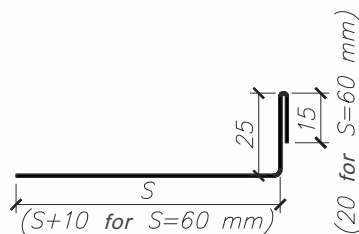


Additional elements

▢ Catalogue of flashings

▢ Flashing OB-41 edge bar

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 1,0 mm thick					
01	OB-41/60	60	-	6000	5,52
02	OB-41/80	80			5,76
03	OB-41/100	100			6,72
04	OB-41/120	120			7,68
05	OB-41/140	140			8,64



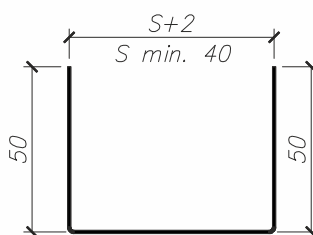
NOTE:

Not described angles should be made as a right angle.

The use is described in detail on page 64

▢ Flashing OB-42 edge bar

No.	Symbol	S [mm]	α [°]	L [mm]	Weight [kg]
Standard – steel sheet 1,0 mm thick					
01	OB-42/40	40	-	6000	6,82
02	OB-42/60	60			7,78
03	OB-42/80	80			8,74
04	OB-42/100	100			9,70
05	OB-42/120	120			10,66
06	OB-42/160	160			12,58
07	OB-42/200	200			14,50
Unusual from sheet metal with a thickness of 1.0					
08	OB-42/ S=..... / L=				



NOTE:

Not described angles should be made as a right angle.

The use is described in detail on page 16

▢ Flat metal sheets

width [mm]	available thicknesses [mm]	typical lengths [mm]	panel used **		available colours
			external facing	internal facing	
1073	0,5 i 0,7*	3000 i 6000	GS insPIRe® S thickness 40 mm module 1000	GS insPIRe® S thickness 40 mm module 1000, GS PIR D	compatible with plate tables
1108			GS insPIRe® S (apart from a thickness of 40 mm) module 1000, GS insPIRe® CH module 1000	GS insPIRe® S (apart from a thickness of 40 mm) module 1000, GS insPIRe® U, GS insPIRe® CH module 1000	
1183			GS insPIRe® U, GS PIR D	-	
1250			GS insPIRe® S module 1140, GS insPIRe® CH module 1140	GS insPIRe® S module 1140, GS insPIRe® CH module 1140	

*- offered upon special order

** - to avoid the difference in colour, it is recommended to choose metal sheet width appropriate to the kind of panel used

Documentation

Order form of SANDWICH PANELS



Order: No _____ of _____

Agent: _____

Supplier: (name, company address, phone/fax, TIN)

Gór-Stal sp. z o.o.

No. 11 Przemysłowa st.
38-300 Gorlice, Poland
Tel./Fax: + 48 18 353 98 00
Account No: 79 1140 1081 0000 5859 5500 1001

Commercial Terms:

Payment method:

Advance (%): _____ payable until: _____

Full payment:

Credit limit:

Remarks:

Ordering party: (name, company address, phone/fax, TIN)

Agent:

Remarks:

Delivery place: (recipient, address, city, post code, phone/fax)

No.	Plate type: GS insPIRe® S GS insPIRe® S MAX GS insPIRe® U GS insPIRe® U MAX GS PIR D GS PIR D MAX GS insPIRe® CH GS insPIRe® CH MAX	Thickness [mm]: 440, 60, 80, 100, 120 60, 80, 100, 120, 140 40/80, 60/100, 80/120 120/160, 150/190, 160/200 100, 120, 160, 200	Plate profiling:		Plate width [mm]: 1000 1140	Colour RAL:		Quantity:		Net price Unit/value:	
			ext.	int.		ext.	int.	L [m]	pcs.	EUR/m²	EUR
01											
02											
03											
04											
05											
06											
07											
08											
09											
10											
11											
12											
13											
14											
15											
In total:								[m²]:		[EUR]:	
Party's Signature Ordering:											

Documentation

Order form of INDIVIDUAL FLASHING



Order: _____
no _____ of _____

To sandwich panels order:
No _____ of _____

Supplier: (name, company address, phone/fax, TIN)

Gór-Stal sp. z o.o.

No. 11 Przemysłowa st.
38-300 Gorlice. Poland
Tel./Fax: + 48 18 353 98 00
Account No: 79 1140 1081 0000 5859 5500 1001

Commercial Terms:

Payment method:

Advance (%): _____ payable until: _____

Full payment:

Credit limit:

Remarks:

Ordering party: (name, company address, phone/fax, TIN)

Delivery place: (recipient, address, city, post code,
phone/fax)

Flashing length: 6 m.
Default $\alpha = 90^\circ$
Shape of flashing acc. to technological catalogue

Ordering Party's signature:

Symbol	S [mm]	α [°]	Thickness [mm]	Length [mm]	Quantity [szt.]	Total weight	Colour RAL
OB-01							
OB-02							
OB-03							
OB-03a							
OB-03b							
OB-04							
OB-05		-					
OB-06							
OB-07							
OB-08	-	-					
OB-09	-	-					
OB-10	-	-					
OB-11	-	-					
OB-12	-	-					
OB-13							
OB-14	-	-					
OB-15							
OB-15a		-					
OB-16	-	-					
OB-17		-					
OB-17a		-					
OB-17b		-					
OB-18		-					
OB-19		-					
OB-20		-					
OB-21		-					
OB-21a		-					
OB-21b		-					
OB-22							
OB-23							
OB-24		-					
OB-24a							
OB-25							
OB-25a							
OB-26							
OB-26a							
OB-27	-	-					
OB-27a							
OB-28	-	-					
OB-29							
OB-30							
OB-31							
OB-31a							
OB-32							
OB-32a							
OB-33		-					
OB-34	-	-					
OB-35		-					
OB-36		-					
OB-37		-					
OB-38		-					
OB-39		-					
OB-40		-					
OB-41		-					
OB-42		-					
Total:							
Net price:							
Net value:							

ACCESSORIES	Type	Size [mm]	Quantity [pcs./Lm]	Colour RAL
Bolts fixing the plate to the structure	Steel G16			
	Steel G12			
	Wood / Concrete			
Screws for flashings				
Rivets				
Gasket	PE			
Gasket	PES			
Gasket	PUS			
Gasket				
Saddle washer	35-35	-		
Washer	Pm1	-		
Covering caps	-----			
Connector	ALF			

Order:
No _____ of _____

Agent:

Supplier: (name, company address, phone/fax, TIN)

Gór-Stal sp. z o.o.

No. 11 Przemysłowa st.

38-300 Gorlice

Tel./Fax: + 48 18 353 98 00

Account No: 79 1140 1081 0000 5859 5500 1001

Ordering party: (name, company address, phone/fax, TIN)

Delivery place: (recipient, address, city, post code, phone/fax)

No.	Sheet thickness [mm]:	Colour RAL:	Length [m]:	Quantity:

Nr.	Sheet thickness [mm]:	Colour RAL:	Length [m]:	Quantity:

Remark:

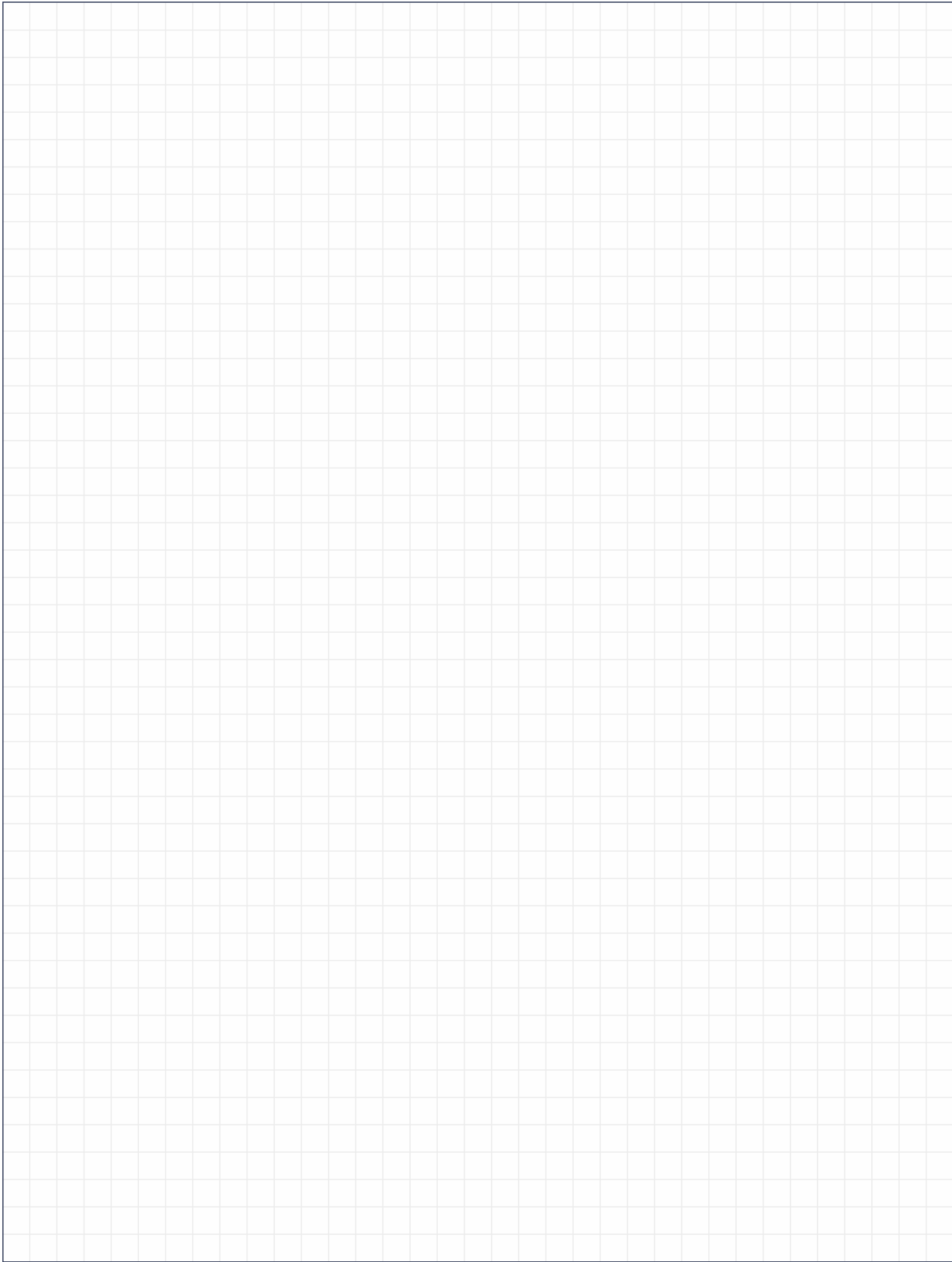
01. Boundary conditions:

- unfolding -> min 114 mm
- shelf width -> min 25 mm
- width of the notching/bend -> min 15 mm
- bending angle -> min 45°
- with an unfolding of above 350 mm, it is recommended to shorten the processing to 3.0 mb.

02. The flashings will be made in accordance with the above drawings and their dimensions.

Remark:

Ordering Party's signature:



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Developed by: Szymon Jamro Msc. Eng., Second Edition, Gorlice 03.2008

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www.termpir.eu