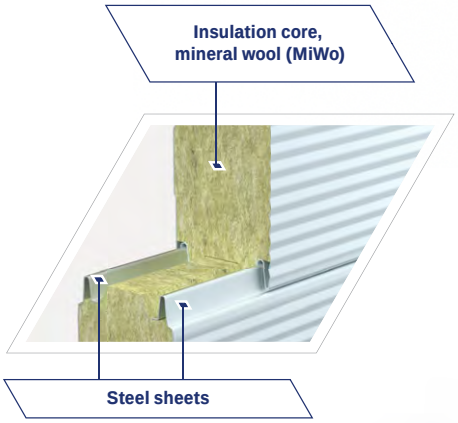
STYLE. QUALITY. FUNCTION.

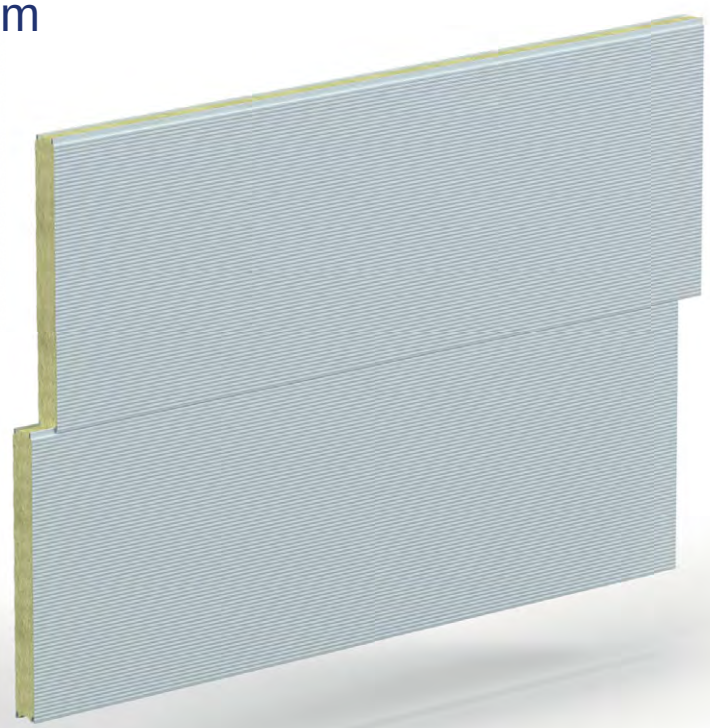
ARPANEL

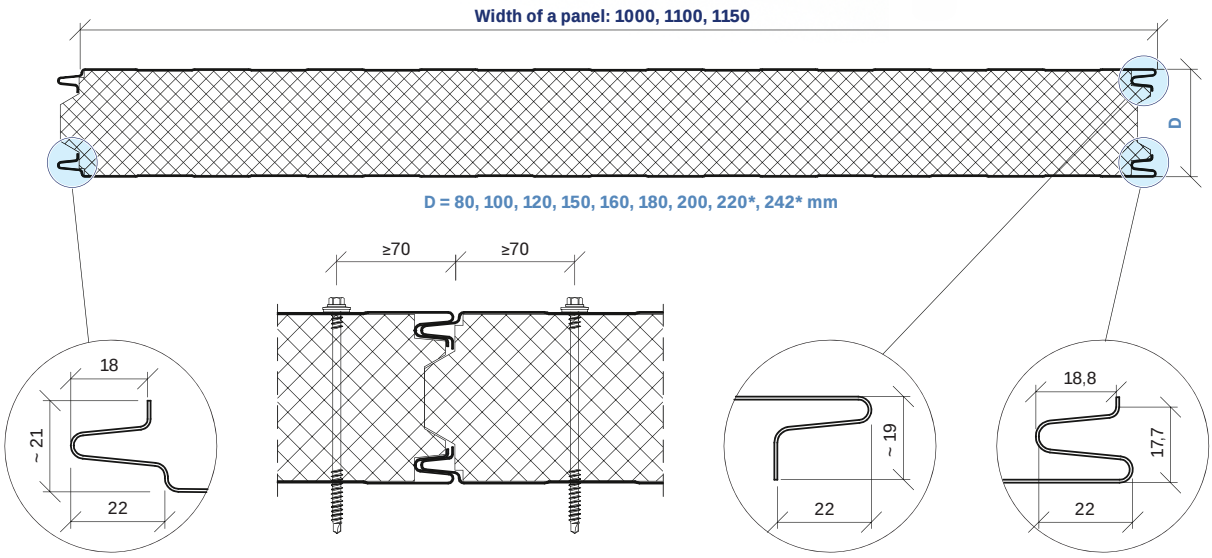
Sandwich panels system

Wall sandwich panel **ARPANEL S MiWo**

- standard fastening system



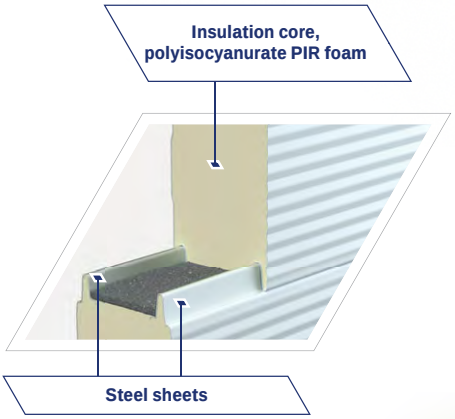


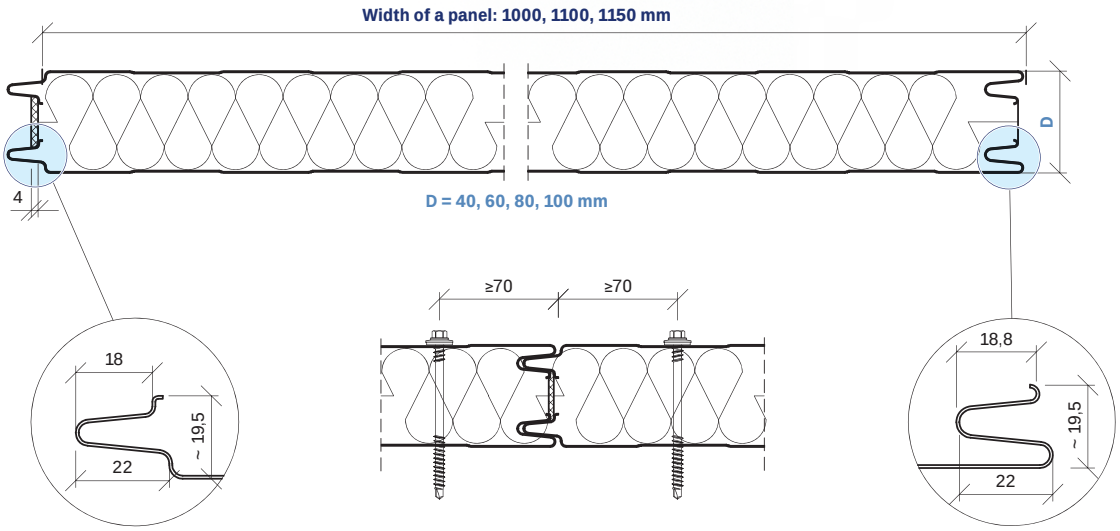


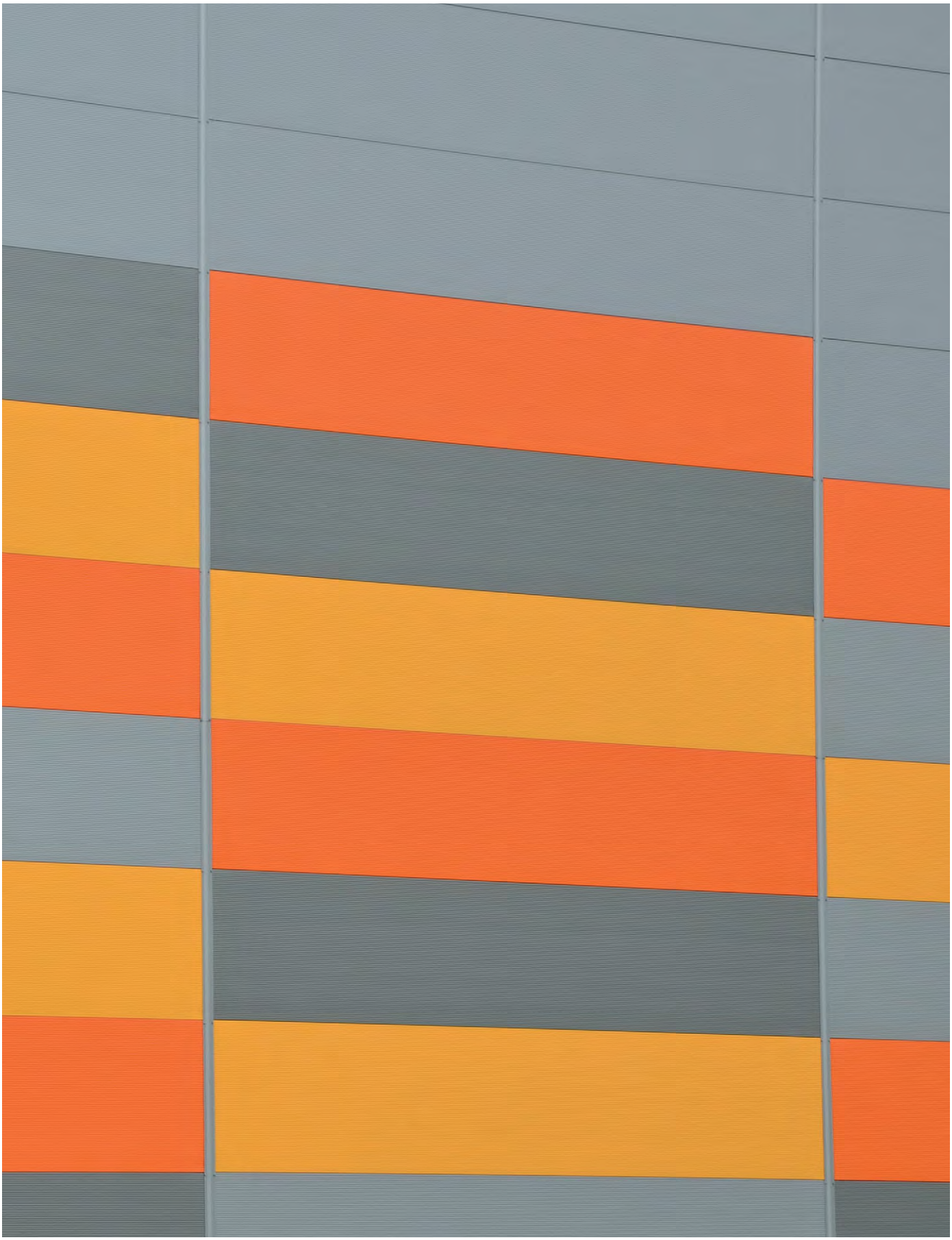
* The 220 mm and 242 mm thicknesses are produced on special order after consultation with the manufacturer

Wall sandwich panel **ARPANEL S PIR**

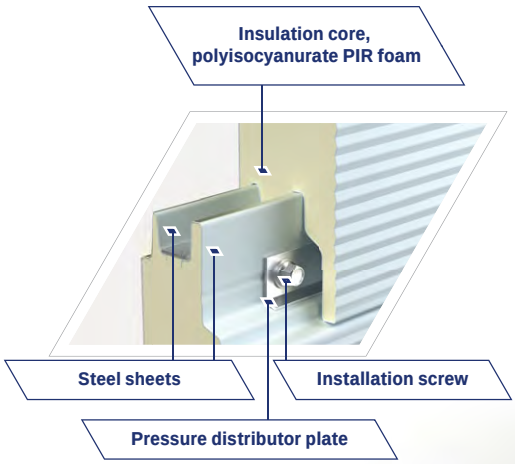
- standard fastening system

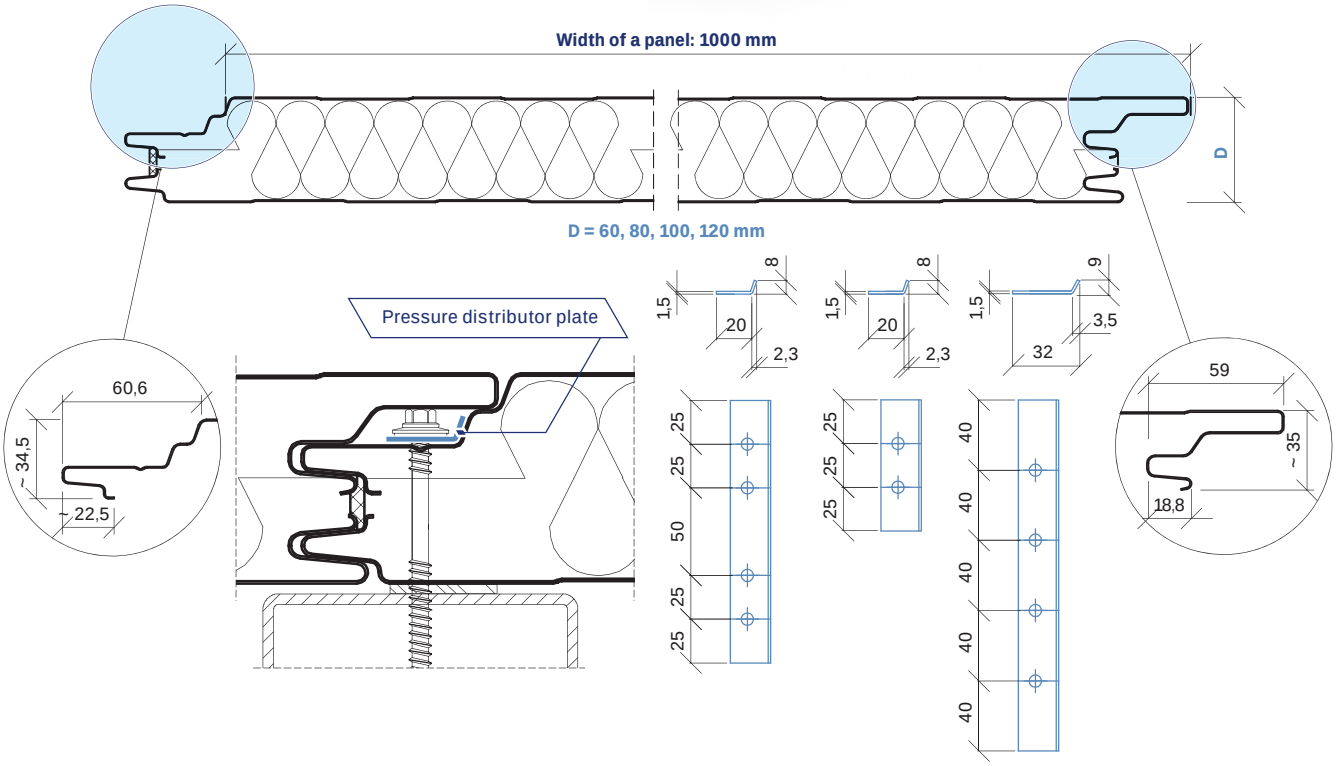




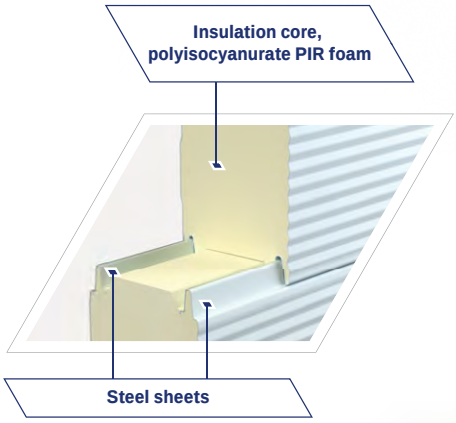


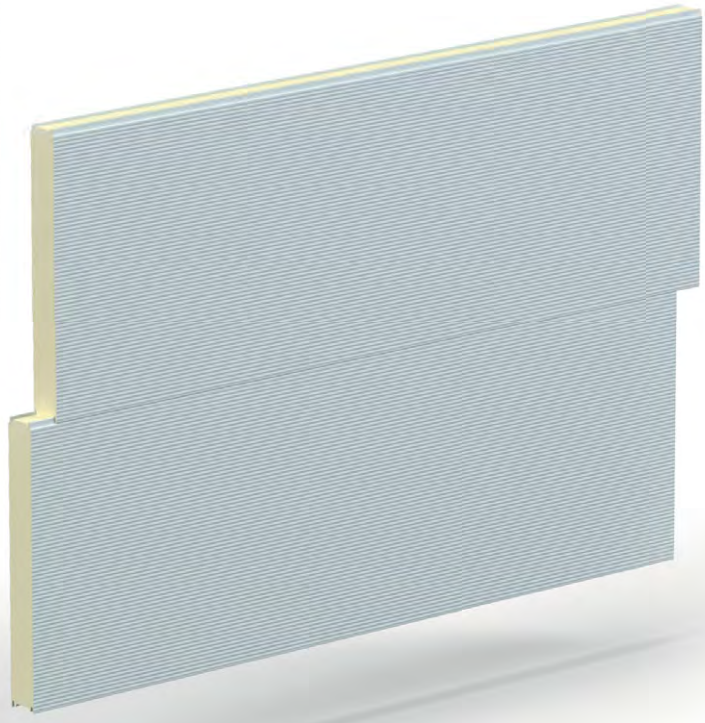
Wall sandwich panel
ARPANEL SU PIR
- hidden fastening system

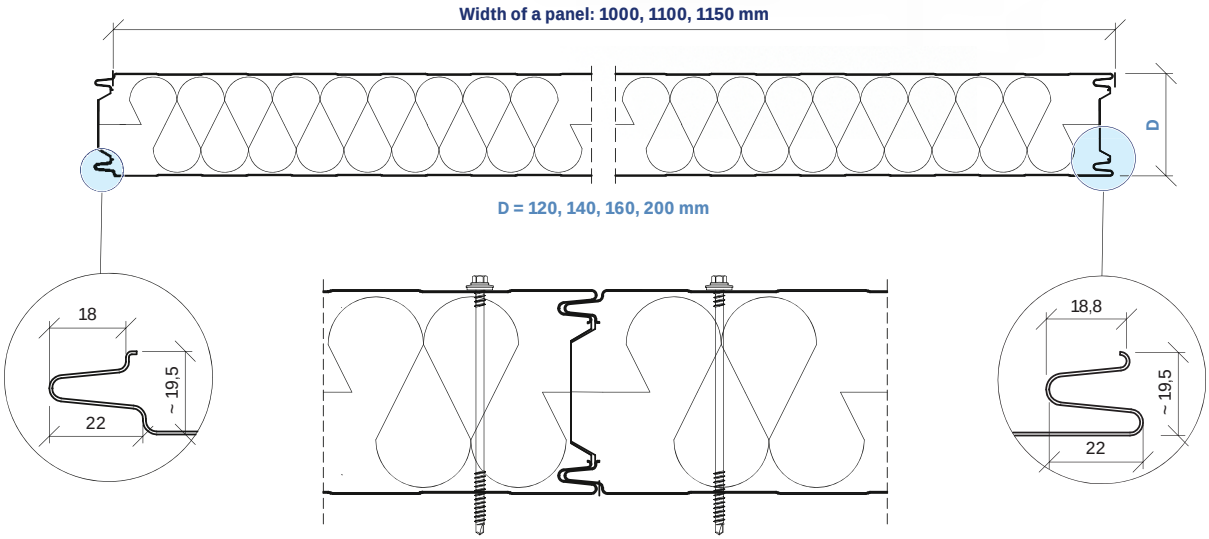


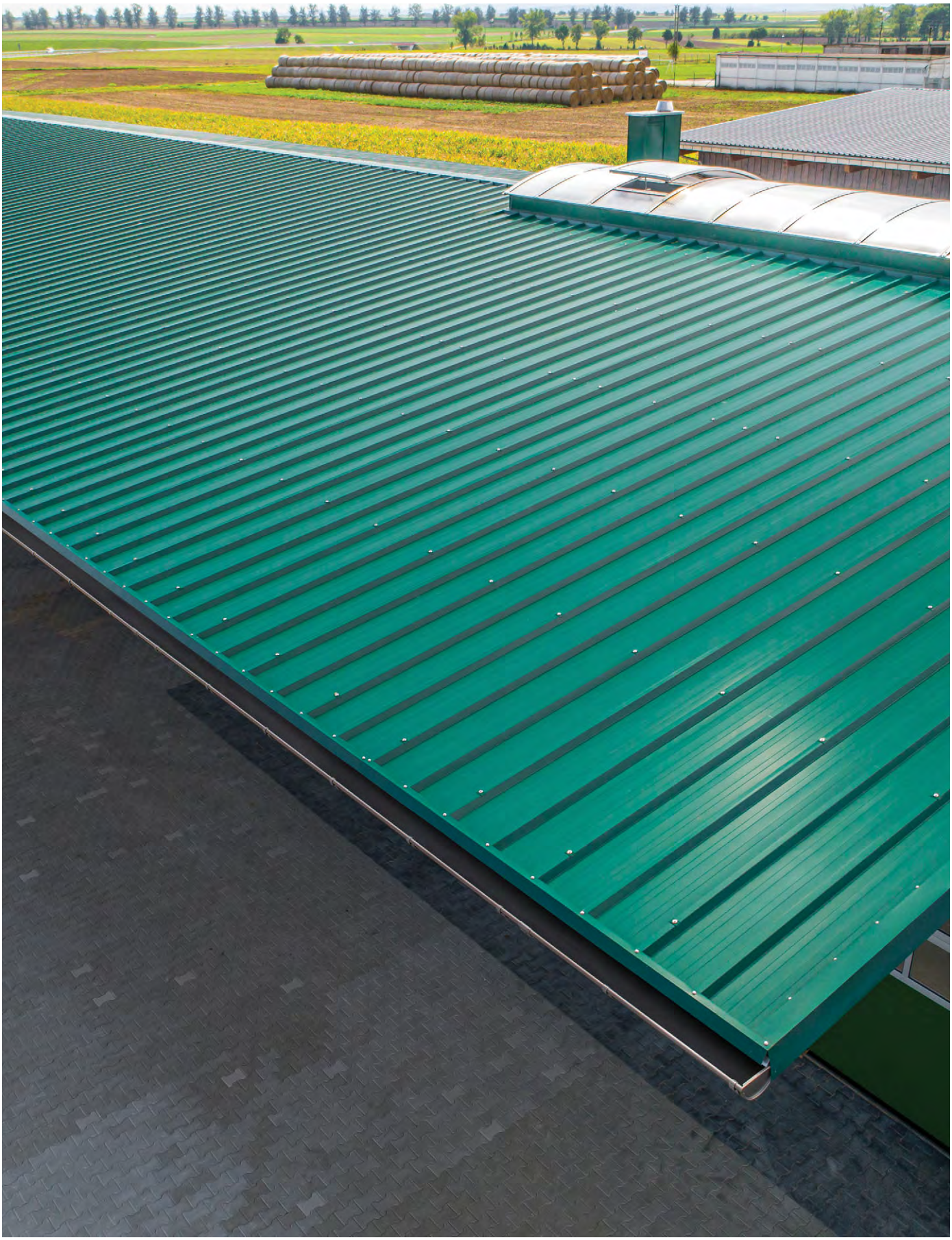


Cold store sandwich panel
ARPANEL CH PIR

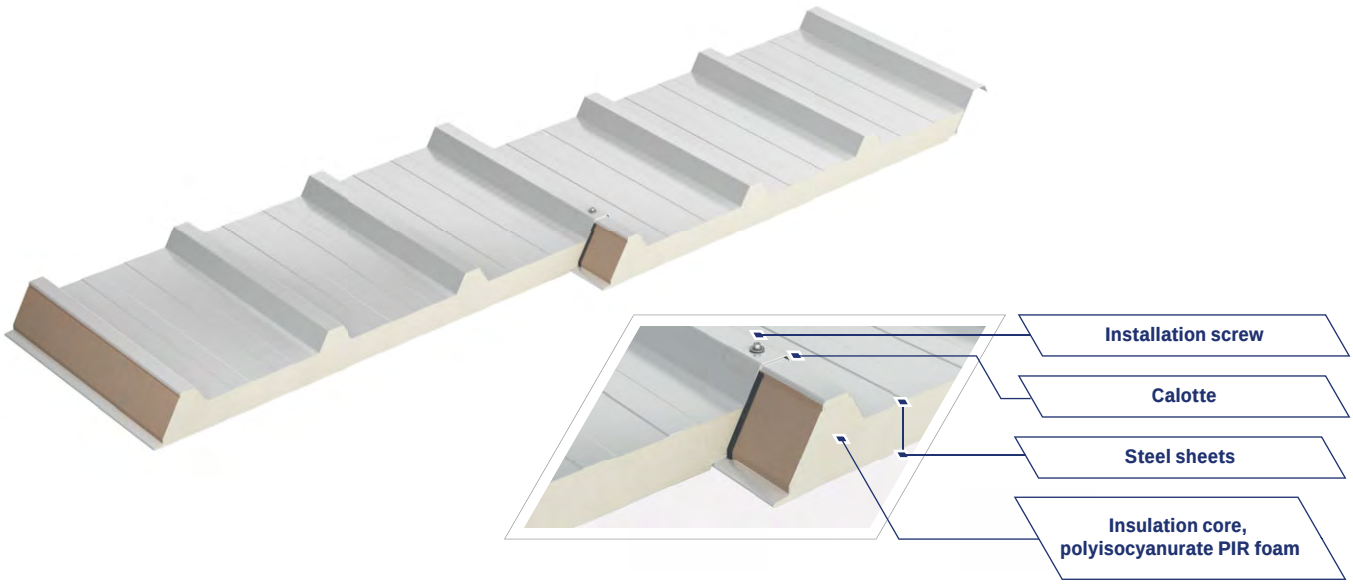


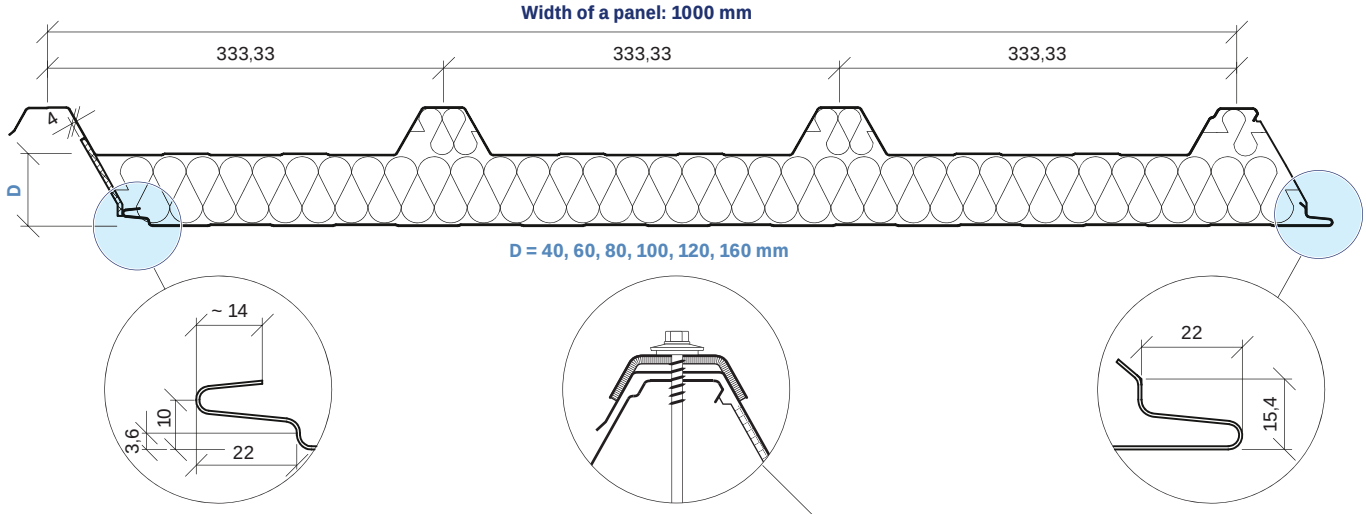




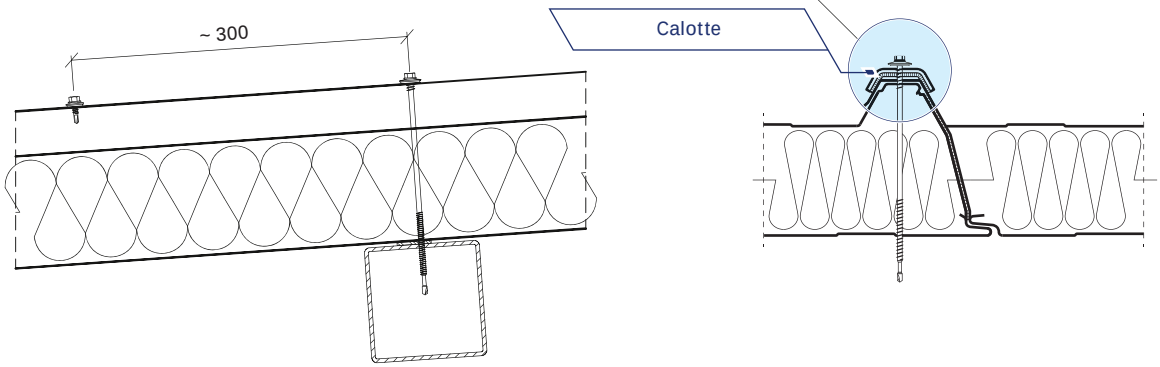


Roof sandwich panel
ARPANEL D PIR

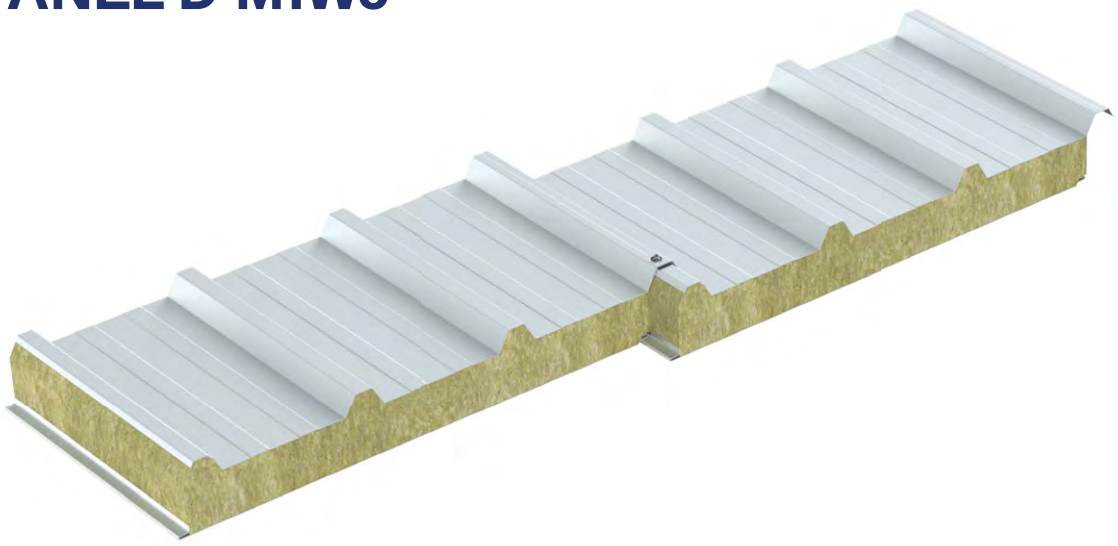


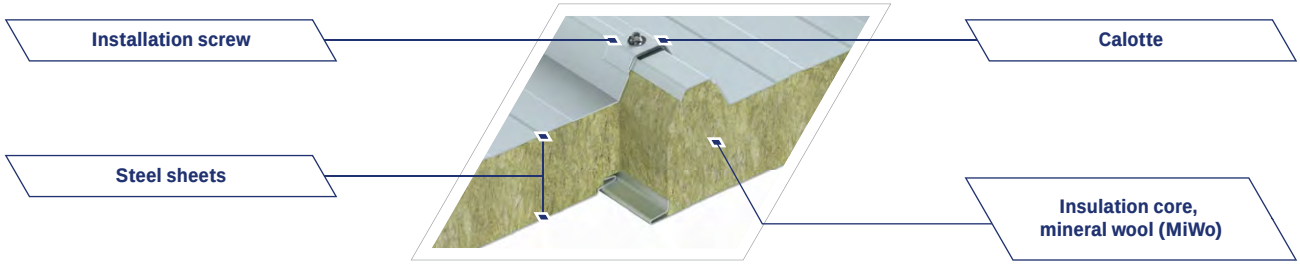


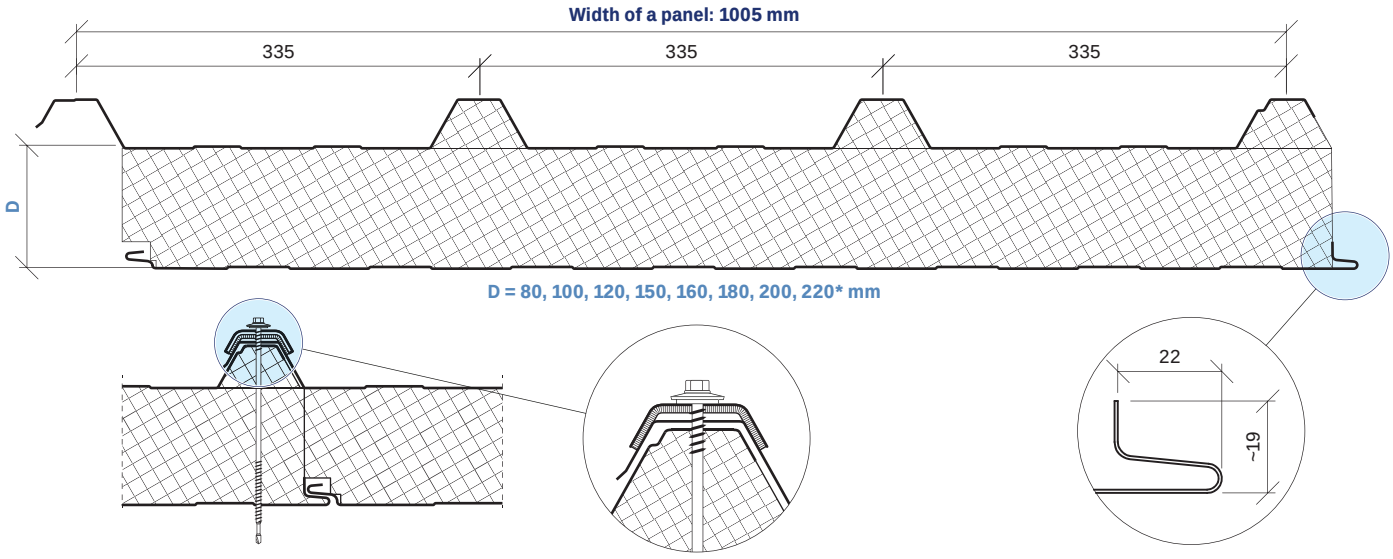
Roof sandwich panels installation system ARPANEL D



Roof sandwich panel
ARPANEL D MiWo

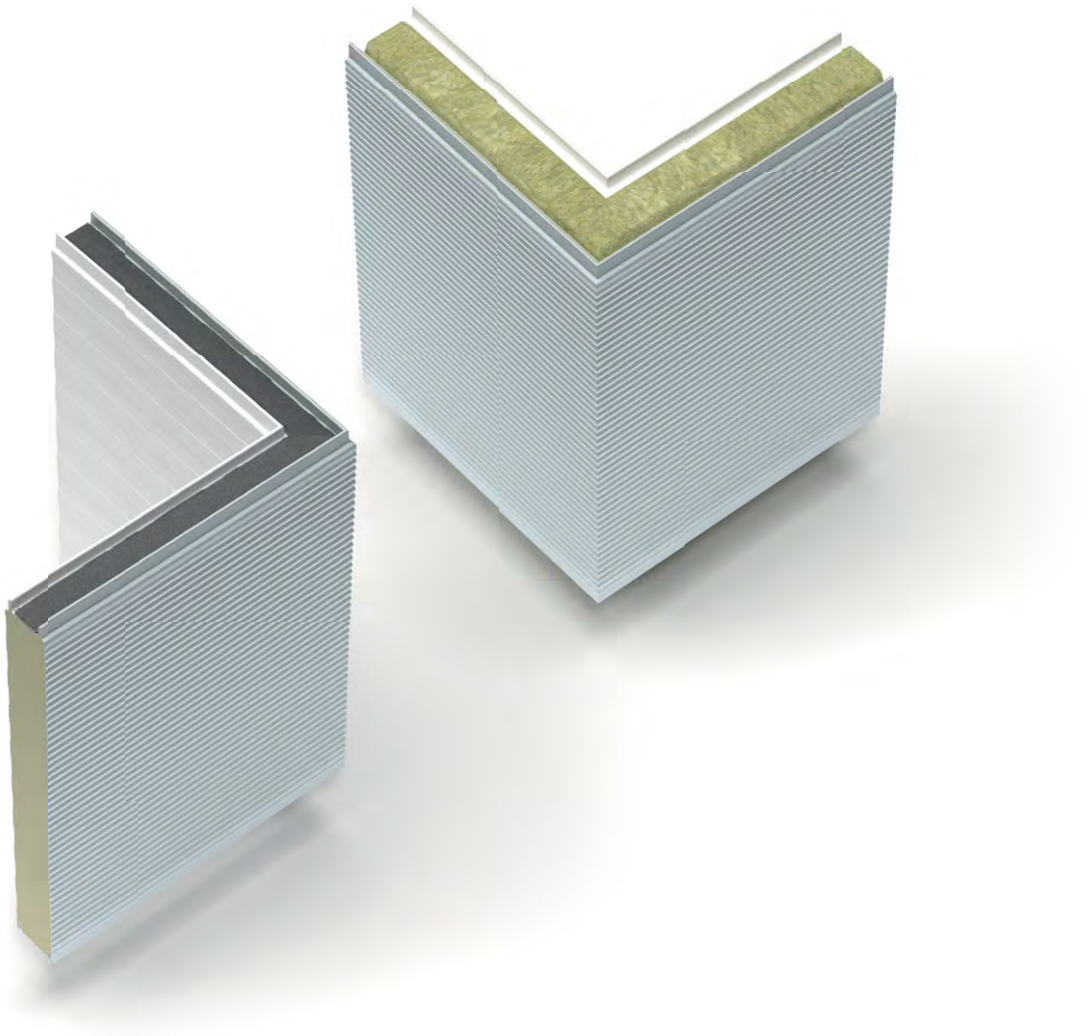


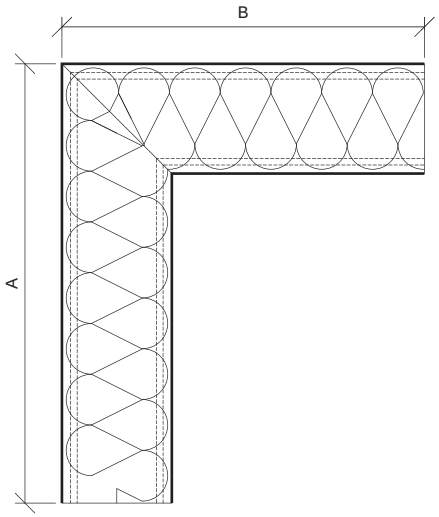




* The 220 mm thickness is produced on special order after consultation with the manufacturer

Corner sandwich panel **ARPANEL**





Type of panel	Thickness [mm]	Dimension A+B [mm]	Dimension A or B
ARPANEL S MiWo	**80 100**	min. 800 / max. 3000	min. 400
	120 150	min. 800 / max. 2500	
	160 180 200	min. 800 / max. 2000	
ARPANEL S PIR	**40 60 80 100**	min. 800 / max. 4000	
ARPANEL SU PIR	**60 80 100**	min. 800 / max. 4000	
	120	min. 800 / max. 3000	
ARPANEL CH PIR	**120 140 160 200**	min. 800 / max. 3000	

Environment and conditions for application of the ARPANEL sandwich panels

When selecting anti-corrosion protective measures for ARPANEL sandwich panels, it is very important to adjust them to the environment/type of the weather where panels are installed. It is necessary to properly recognize and to determine the environment aggressiveness class, the outdoor one (from C2 to C5-M) and the indoor (from A1 to A6).

According to EN ISO 12944, depending on the aggressiveness level, the weather conditions (e.g. salinity, humidity, sulfur dioxide) were divided into classes, from C1 to C5M in case of the outdoor environment and from A1 do A6 for the indoor environments. For environments C1-C3, so called neutral ones, all coats type PE25 are applied, while in such locations as meat processing factories, fish processing factories, fertilizers factories, the designer cooperating with a user stipulates weather conditions on the basis of which the manufacturer can choose proper coatings.

Corrosivity category

Outdoors		Indoors	
C1		A1	Heated buildings, with a clean atmosphere, e.g. offices, stores, schools and hotels.
C2	Low pollution rate environments. Mainly rural areas.	A2	Non-heated buildings, where condensation may occur, e.g. warehouses, sports halls.
C3	Mid pollution rate environments. Mainly urban and industrial areas and near-coastal areas characterized by low salinity.	A3	Production rooms with high humidity and certain air pollution, e.g. foodstuffs plants, laundries, breweries, dairies.
C4	Mid salinity environments. Mainly industrial areas. 10 < 20 km from sea	A4	Chemicals factories, swimming pools, shipyards
C5	High humidity rate environments and with aggressive atmosphere. Mainly industrial areas. 0 < 10 km from sea	A5	Buildings or areas with nearly continuous condensation and high pollution rate.
C5M	Near-coastal and sea areas with large salinity.	A6	Buildings or areas with nearly continuous condensation and high pollution rate.

External UV ultraviolet radiation is determined in accordance with EN10169, and in compliance with Ruv1- Ruv4 category. The UV resistance category defines how well a coating retains its original color and gloss when exposed to external conditions. Coatings in the Ruv1 category demonstrate very low resistance, and should only be used indoors, while coatings in the Ruv4 category are highly resistant to UV radiation, and therefore recommended for outdoor use.

UV resistance category

	UV resistance	
Ruv1	Very low	-
Ruv2	Low	High level of the color change, acceptable change of the color. Significant loss of gloss.
Ruv3	Average	Moderate color change and loss of the color are acceptable. Loss of the gloss at mid pace.
Ruv4	High	Minimal color change and loss of the color are acceptable. Loss of gloss at very low level.

In the following table the exemplary anti-corrosion protection of steel sheets for particular environments is determined.

Type of protection against corrosion			SP	SP	PVDF	PVDF+	PUR	PVC(P)	PVC+F
Anti-corrosion classification [DIN 55928-8]			II	III	III	III	III	III	III
General organic density [EN 13523-1]			15	25	25	35	50	175-200	120-200
Category of corrosion resistance**	Outdoors – EN 10169-2		-	RC3	RC3	RC4	RC5	RC5	-
	Indoors – EN 10169-3		CPI2	CPI3	CPI3	CPI4	CPI5	CPI4	CPI5
Types of outdoor atmosphere / corrosivity category EN 10169-2	Rural - normal	C2						***	
	Urban and industrial	C3 i C4						***	
	Sea – 0<10 km from sea	C5 - M						***	
	Sea – 10<20 km from sea	C4						***	
	Heavy industrial	C5-I						***	
Types of indoor atmosphere / corrosivity category EN 10169-3	Non-corrosive atmosphere Routine conservation – normal Low humidity	Ai1 -40°C → 25°C 0% - 40%*							
	Non-corrosive atmosphere Routine conservation – normal Average humidity	Ai2 0°C → 25°C 40% - 60%*							
	Non-corrosive atmosphere Delicate cleaning High humidity	Ai3 0°C → 25°C 60% - 80%*							
	Slightly corrosive atmosphere Delicate cleaning Humid (condensation risk)	Ai4 0°C → 30°C 60% - 80%*							
	Corrosive atmosphere Intensive cleaning Very humid (frequent condensation risk)	Ai5 0°C → 35°C 80% - 90%*							
	Strongly corrosive atmosphere Very intensive cleaning Saturated (constant condensation risk)	Ai6 0°C → 40°C 90% - 100%*							
Flexibility									
Resistance to dirt									
Temperature resistance (°C)			+70	+80	+110	+110	+110	+70	+70
UV resistance category (ultraviolet radiation) EN 13523-10			-	Ruv3	Ruv4	Ruv4	Ruv4	Ruv2	-

Legend:

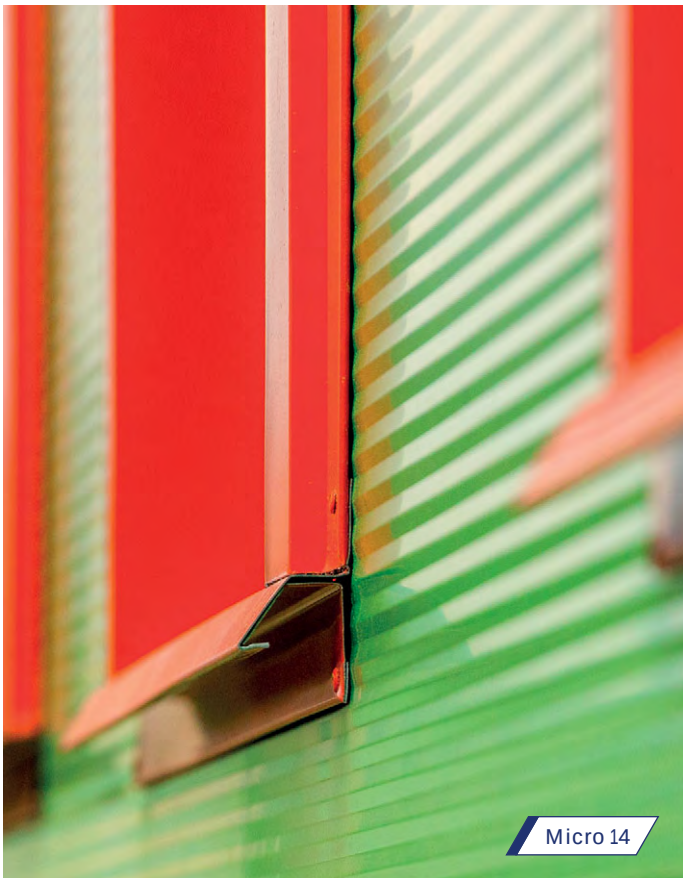
unsuitable | Good with exceptions | Good | Very good | Very good with no exceptions

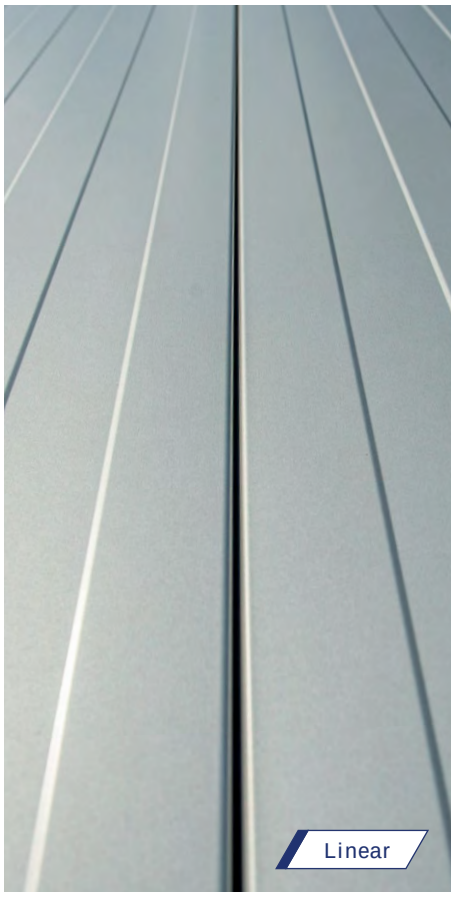
* During cleaning process, the temperature cannot drop below the condensation point. Detailed information is provided in the table: temperature of the condensation point concerns a particular ambient temperature and the relative humidity. In case of cooling, the working temperature must be at least 3°C higher than the condensation point.

** The categories of corrosiveness depend on climate conditions inside and outside the building. Standard external climate conditions: C1, C2, C3, C4, C5-M and C5-I.
Example: C3 external atmosphere - choose the steel metal sheet with RC3 or RC4 category of corrosiveness.

*** Recommended to be used from the 48th parallel and at max. temp. 70°C

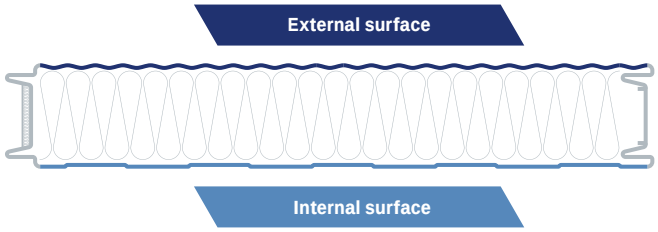

Micro 8


Micro 14

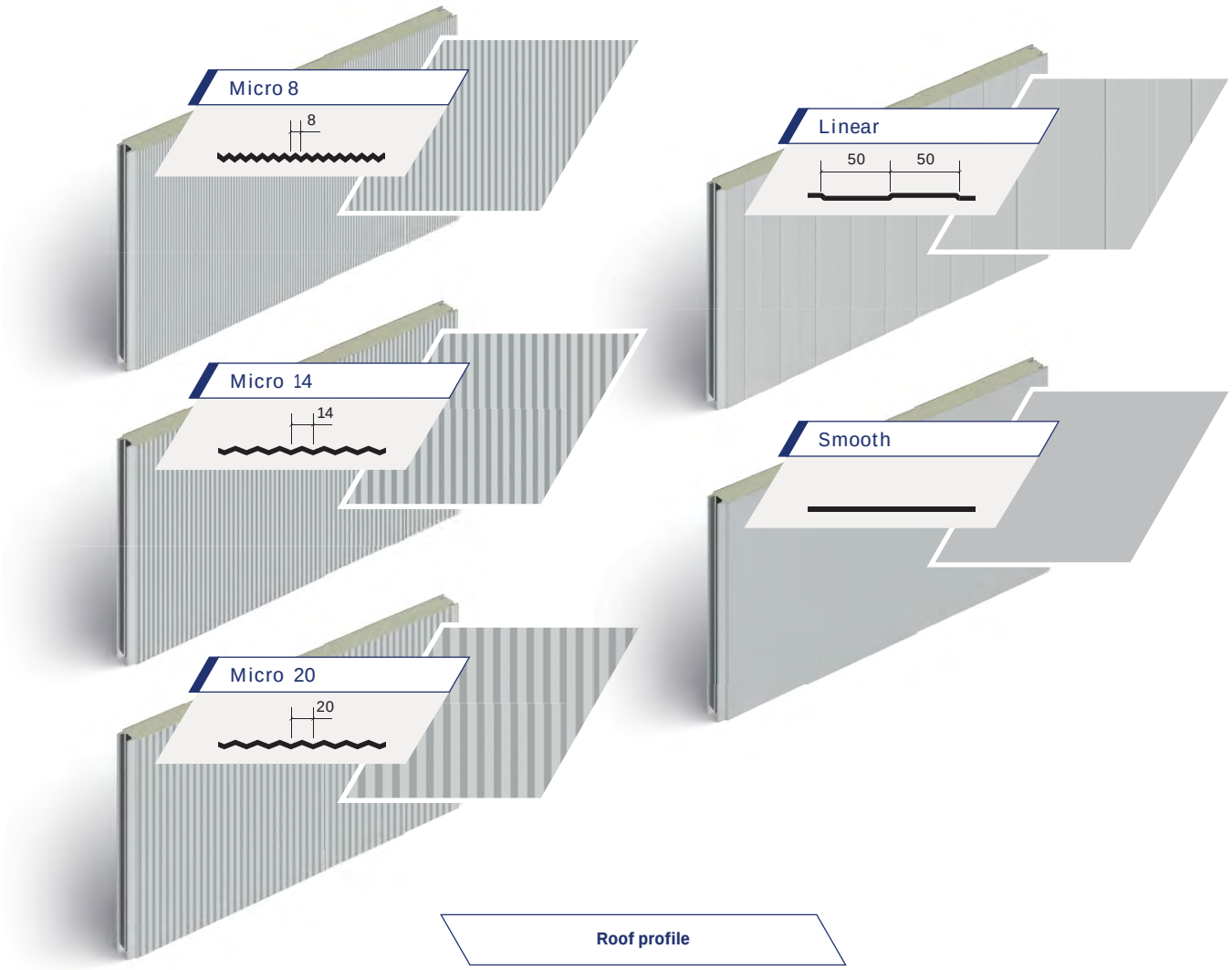

Linear


Roof

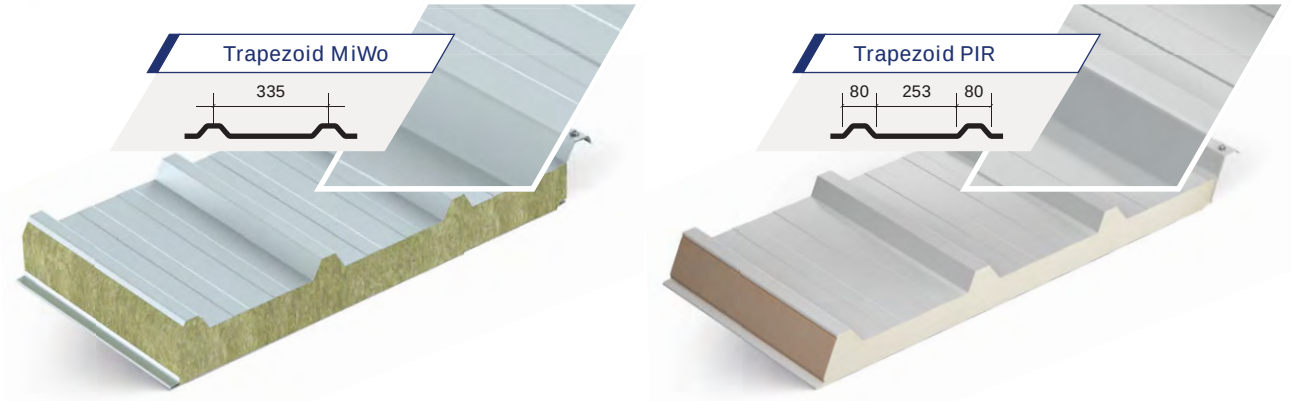

Smooth



Profilation	External surface	Internal surface
Linear	YES	YES
Smooth	YES	YES
Micro 14	YES	NO
Micro 8	YES	NO
Micro 20	NO	YES



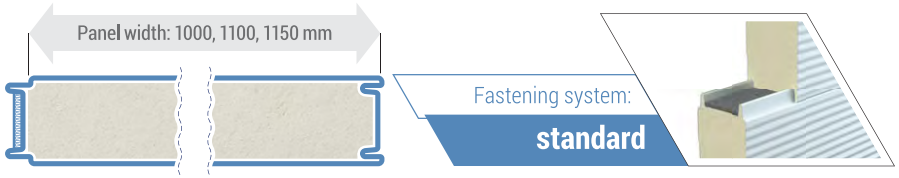
Roof profile



ARPANEL

Technical parameters of ARPANEL sandwich panels

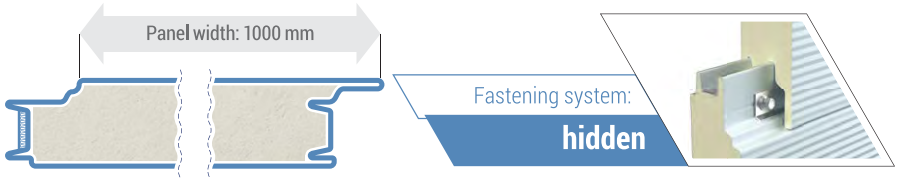
Wall sandwich panel ARPANEL S PIR – standard fastening system



Available lengths :**2-18,5 m** \ Thickness of facings: **0,5/0,5 mm** \ Core density: **40 ± 3 kg/m³**

Panel thickness [mm]	Weight [kg/m²]	Heat transfer coefficient $U_{d,S}$ [W/m²*K]	WG PN-B-02867	Fire resistance class EN 13501-1	Fire resistance class EN 13501-2	Fire resistance class EN 13501-2:2016 Ceiling	Fire resistance class EN 13501-5	Proper acoustic insulation Rw (C, C_{tr})[dB]	Sound absorption α_w
40	9,6	0,58	NRO	B- s1,d0	NPD	NPD	not applicable	25 (-2; -4)	0,15
60	10,4	0,37			E 15 / EI 15	EI 15			
80	11,2	0,27			E 20 / EI 20				
100	11,9	0,22			E 30 / EI 30	EI 30			

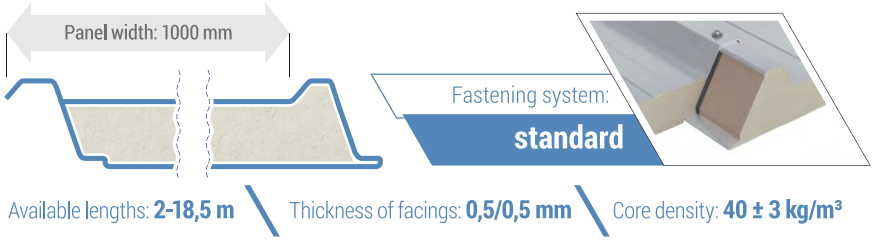
Wall sandwich panel ARPANEL SU PIR – hidden fastening system



Available lengths: **2-18,5 m** \ Thickness of facings: **0,5/0,5 mm** \ Core density: **40 ± 3 kg/m³**

Panel thickness [mm]	Weight [kg/m²]	Heat transfer coefficient $U_{d,S}$ [W/m²*K]	WG PN-B-02867	Fire resistance class EN 13501-1	Fire resistance class EN 13501-2	Fire resistance class EN 13501-2:2016 Ceiling	Fire resistance class EN 13501-5	Proper acoustic insulation Rw (C, C_{tr})[dB]	Sound absorption α_w
60	10,8	0,40	NRO	B- s1,d0	NPD	NPD	not applicable	25 (-2; -4)	0,15
80	11,6	0,29							
100	12,4	0,23			E 30 / EI 20				
120	13,2	0,19			E 30 / EI 30				

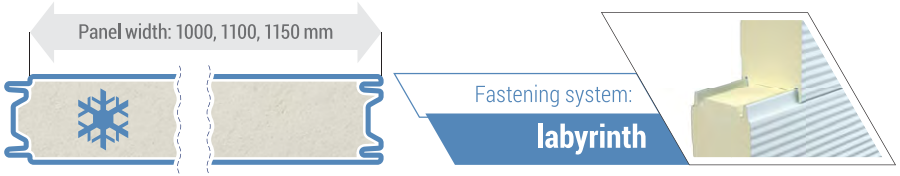
Roof sandwich panel ARPANEL D PIR



Available lengths: **2-18,5 m** | Thickness of facings: **0,5/0,5 mm** | Core density: **40 ± 3 kg/m³**

40/80	9,8	0,48	not applicable	B-s2,d0	NPD	not applicable	Broof(t1)	25 (-1; -4)	0,15
60/100	10,6	0,33							
80/120	11,3	0,26							
100/140	12,1	0,21			REI 30 / RE 60		Broof(t1),(t3)		
120/160	12,9	0,18							
160/200	14,4	0,13					Broof(t1)	NPD	NPD

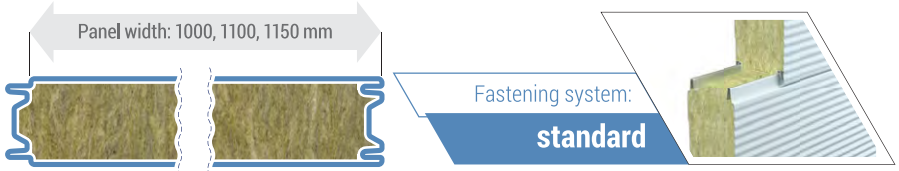
Cold store sandwich panel ARPANEL CH PIR



Available lengths: **2-18,5 m** | Thickness of facings: **0,5/0,5 mm** | Core density: **40 ± 3 kg/m³**

120	12,6	0,17*	NRO	B-s1,d0	E 30 / EI 30	NPD	not applicable	24 (-2; -4)	0,15
140	13,4	0,15*							
160	14,2	0,13*							
200	15,7	0,10*			E 60 / EI 45				

Wall sandwich panel ARPANEL S MiWo – standard fastening system

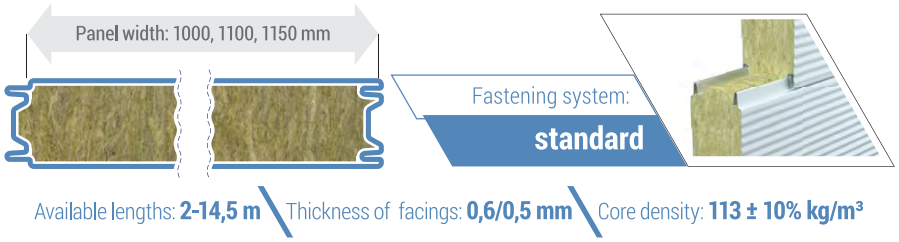


Available lengths: **2-14,5 m** | Thickness of facings: **0,6/0,5 mm** | Core density: **105 ± 10% kg/m³**

80	17,5	0,48	NRO	A2-s1,d0	E 60 / EI 60	NPD	not applicable	30 (-1; -2)	0,15
100	19,6	0,39			E 120 / EI 60	EI 30		32 (-1, -3)	
120	21,8	0,32			E 120 / EI 120	EI 120			
150	25,0	0,26			E 240 / EI 240			32 (-2;-4)	
160	26,1	0,24							
180	28,3	0,22						32(-3;-5)	
200	30,4	0,20						31(-1;-3)	
220**	32,6	0,18							
242**	35,0	0,16						NPD	NPD

Wall sandwich panel ARPANEL S MiWo MXL – standard fastening system

NEW!

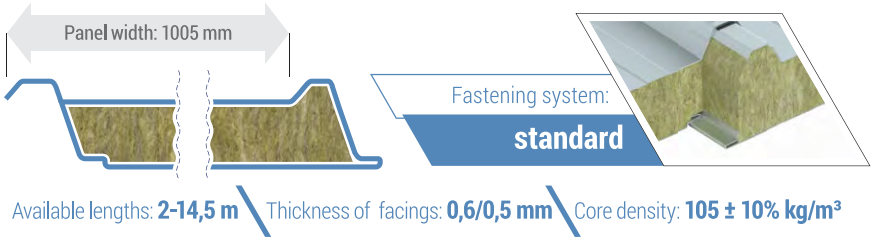


Available lengths: **2-14,5 m** \ Thickness of facings: **0,6/0,5 mm** \ Core density: **113 ± 10% kg/m³**

100	20,3	0,40	NRO	A2-s1,d0	E 120 / EI 60	NPD	not applicable	31 (-1; -3)	0,15
120	22,6	0,33			E 120 / EI 120				
150	26,1	0,27			E 240 / EI 240			31 (-2; -3)	
160	27,2	0,25							
180	29,5	0,22							
200	31,8	0,20							

Roof sandwich panel ARPANEL D MiWo

NEW!



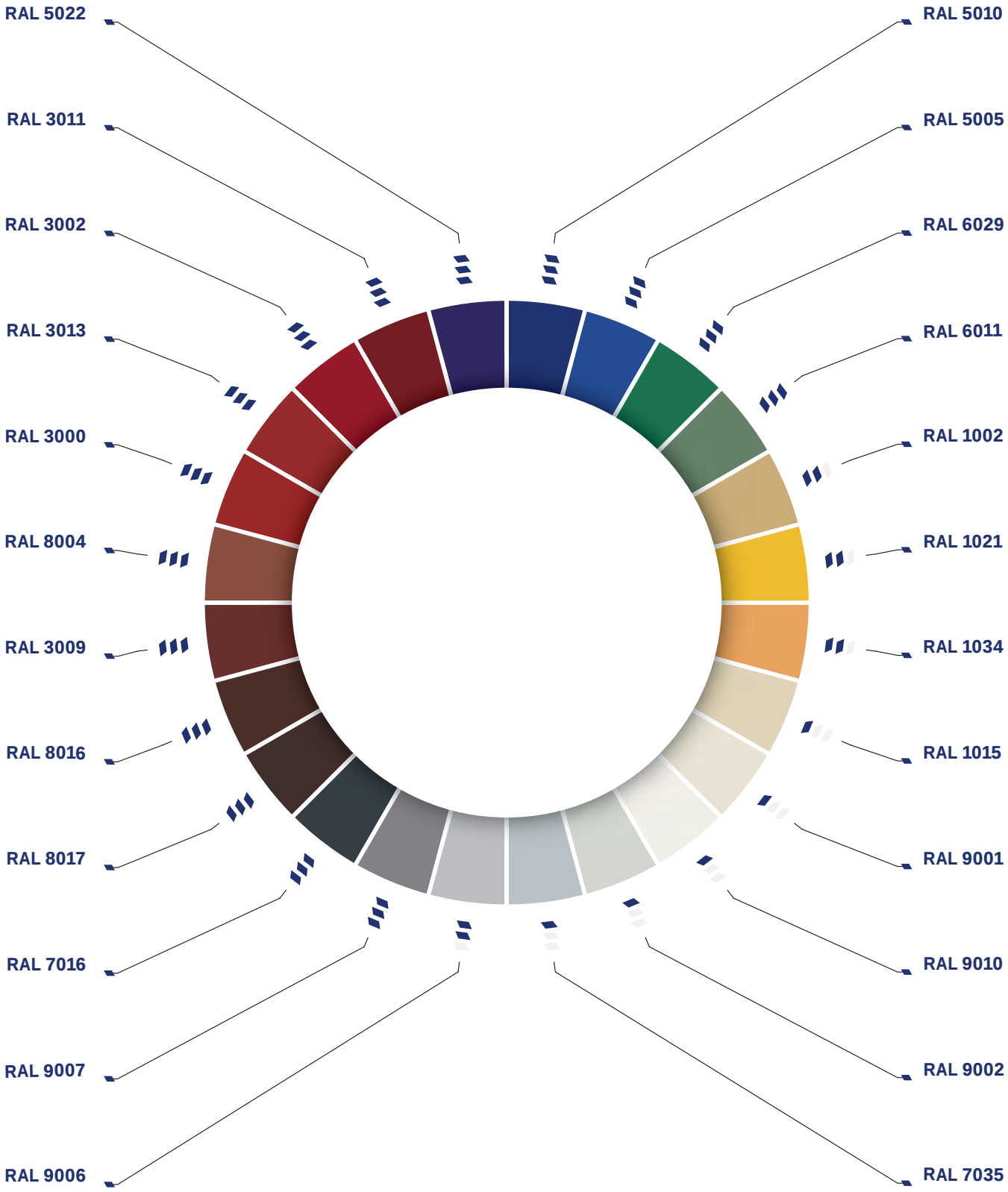
Available lengths: **2-14,5 m** \ Thickness of facings: **0,6/0,5 mm** \ Core density: **105 ± 10% kg/m³**

80/120	18,7	0,48	not applicable	A2-s1,d0	NPD	not applicable	Broof (t1)	30 (-1; -3)	0,20
100/140	20,9	0,39			RE 120 / REI 90				
120/160	23,1	0,32							
150/190	26,3	0,26					Broof (t1),(t3)		
160/200	27,4	0,24					Broof (t1)		
180/220	29,6	0,22						31 (-1; -3)	
200/240	31,8	0,20					Broof (t1),(t3)		
220/260**	33,9	0,18					Broof (t1)		

Panel thickness [mm]	Weight [kg/m²]	Heat transfer coefficient $U_{d,S}$ [W/m²*K]	WG PN-B-02867	Fire resistance class				Proper acoustic insulation Rw (C, C_{tr})[dB]	Sound absorption α_w
				EN 13501-1	EN 13501-2	EN 13501-2:2016 Ceiling	EN 13501-5		

The presented contents and drawings are demonstrative material only. Adamietz Sp z o.o, the producer of sandwich panels ARPANEL, is not responsible for any differences between the content of the tables and the real products parameters.
* The design heat transfer coefficient designated for 0°C. **The 220 mm and 242 mm thicknesses are produced on special order after consultation with the manufacturer.

The palette of exemplary RAL colors applied for facings of ARPANEL sandwich panels



Color groups:
- **Group III:** dark
- **Group II:** bright
- **Group I:** very bright

* The presented groups of RAL colors are demonstrative material only and may differ in shades from real colors.

Edition I 2023

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ARPANEL
take care **locally** - protect **globally**

Please consider the environment before printing this catalogue.