

STYLE. QUALITY. FUNCTION.

ARPANEL

Sandwich panels system



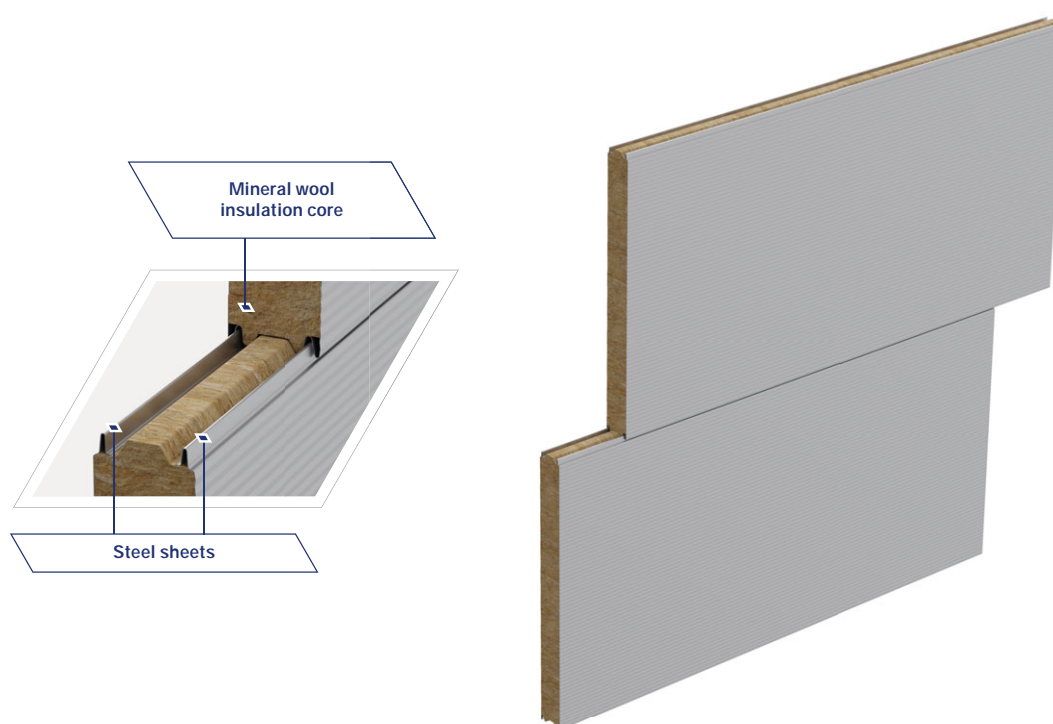
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Wall sandwich panel

ARPANEL S MiWo

- standard fastening system



Parameters	
Name	ARPANEL S MIWo
Type of panel	wall
Insulation core	mineral wool
Fastening system	standard
Thickness [mm]	80 100 120 150 160 180 200 220* 242*
Module width [mm]	1000 1100 1150
Length [mm]	2 000 - 14 500
Standard colors of external facings	standard RAL palette

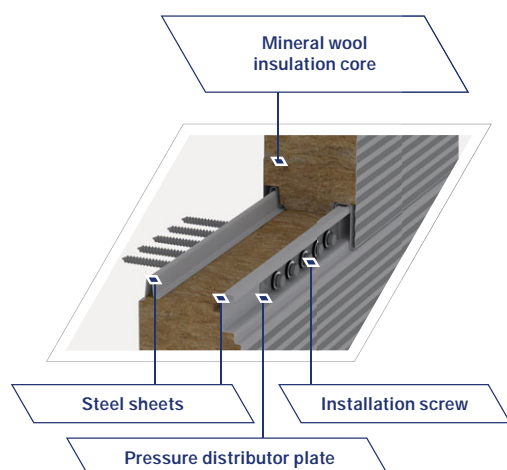
*The 220 mm and 242 mm thicknesses are produced by special order after consultation with the manufacturer.



Wall sandwich panel

ARPANEL SU MiWo

- hidden fastening system



Parameters	
Name	ARPANEL SU MiWo
Type of panel	wall
Insulation core	mineral wool
Fastening system	hidden
Thickness [mm]	100 120 150 200 242*
Module width [mm]	1000
Length [mm]	2 000 - 14 500
Standard colors of external facings	standard RAL palette

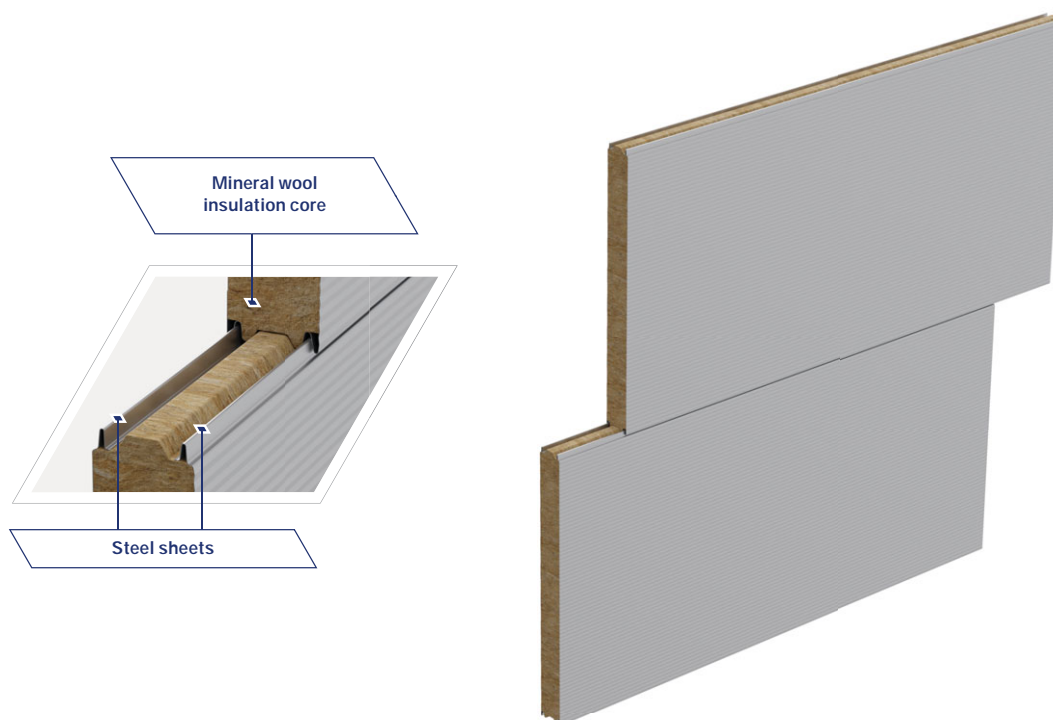
*The 242 mm thickness is produced by special order after consultation with the manufacturer.



Wall sandwich panel with increased load-bearing capacity

ARPANEL S MiWo MXL

- standard fastening system



Core density $113 \pm 10\% \text{ kg/m}^3$

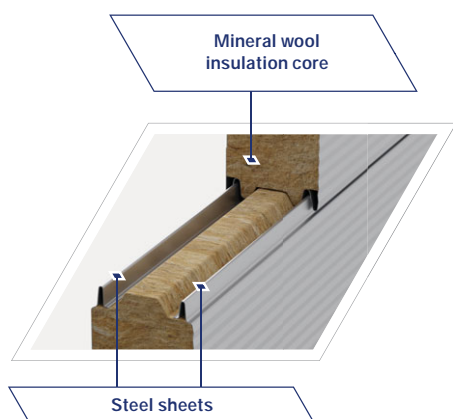
Parameters	
Name	ARPANEL S MiWo MXL
Type of panel	wall
Insulation core	mineral wool
Fastening system	standard
Thickness [mm]	100 120 150 160 180 200
Module width [mm]	1000 1100 1150
Length [mm]	2 000 - 14 500
Standard colors of external facings	standard RAL palette



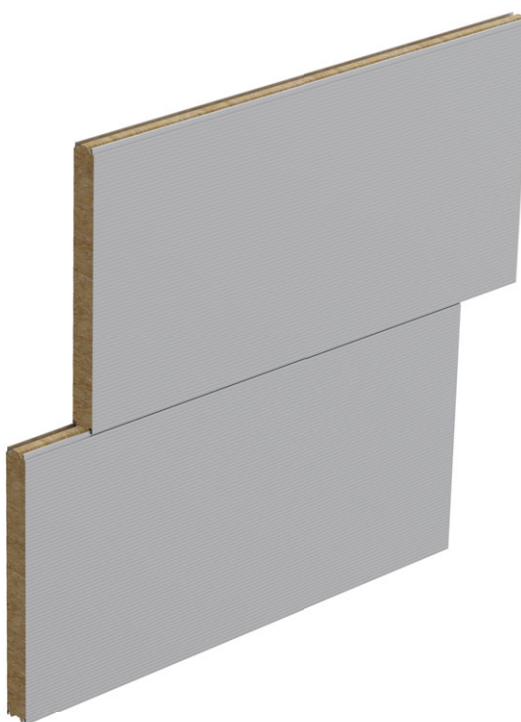
Wall sandwich panel with increased thermal insulation properties

ARPANEL S MiWo Lt

- standard fastening system



Core density $85 \pm 10\% \text{ kg/m}^3$

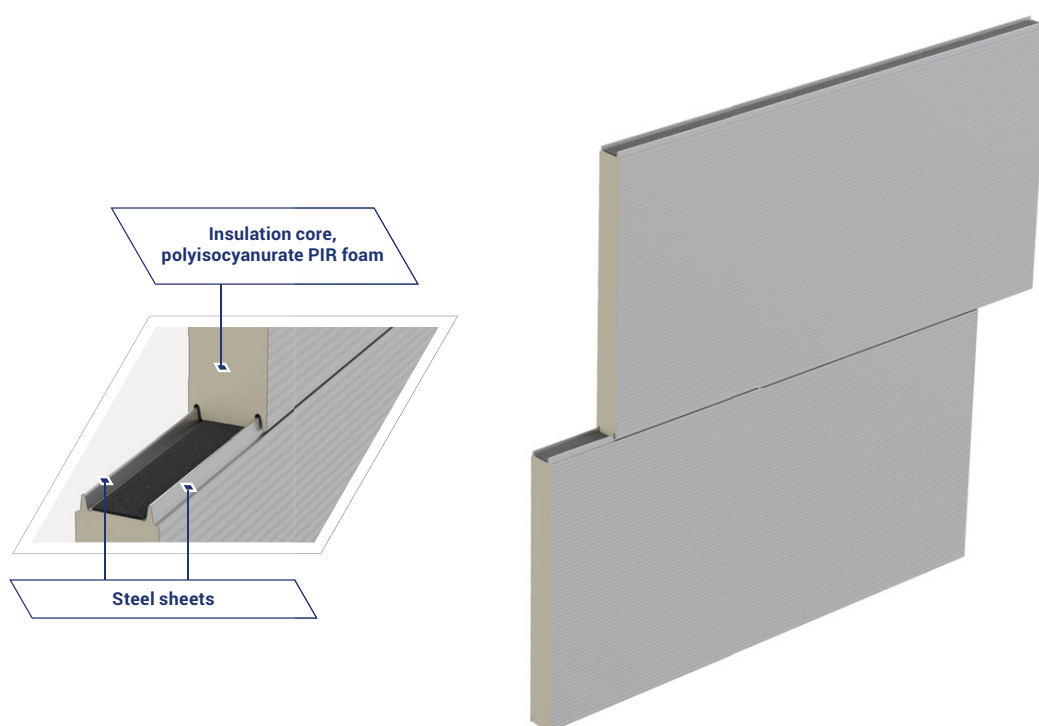


Parameters

Name	ARPANEL S MiWo Lt
Type of panel	wall
Insulation core	mineral wool
Fastening system	standard
Thickness [mm]	80 100 120 150 160 180 200
Module width [mm]	1000 1100 1150
Length [mm]	2 000 - 14 500
Standard colors of external facings	standard RAL palette



Wall sandwich panel **ARPANEL S PIR** - standard fastening system



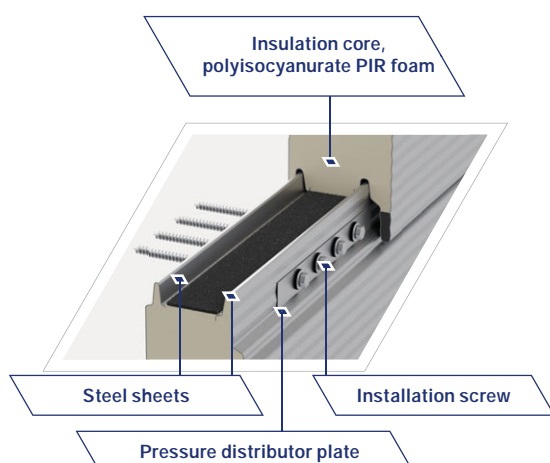
Parameters	
Name	ARPANEL S PIR
Type of panel	wall
Insulation core	polyisocyanurate foam
Fastening system	standard
Thickness [mm]	60 80 100
Module width [mm]	1000 1100 1150
Length [mm]	2 000 - 18 500
Standard colors of external facings	standard RAL palette



Wall sandwich panel

ARPANEL SU PIR

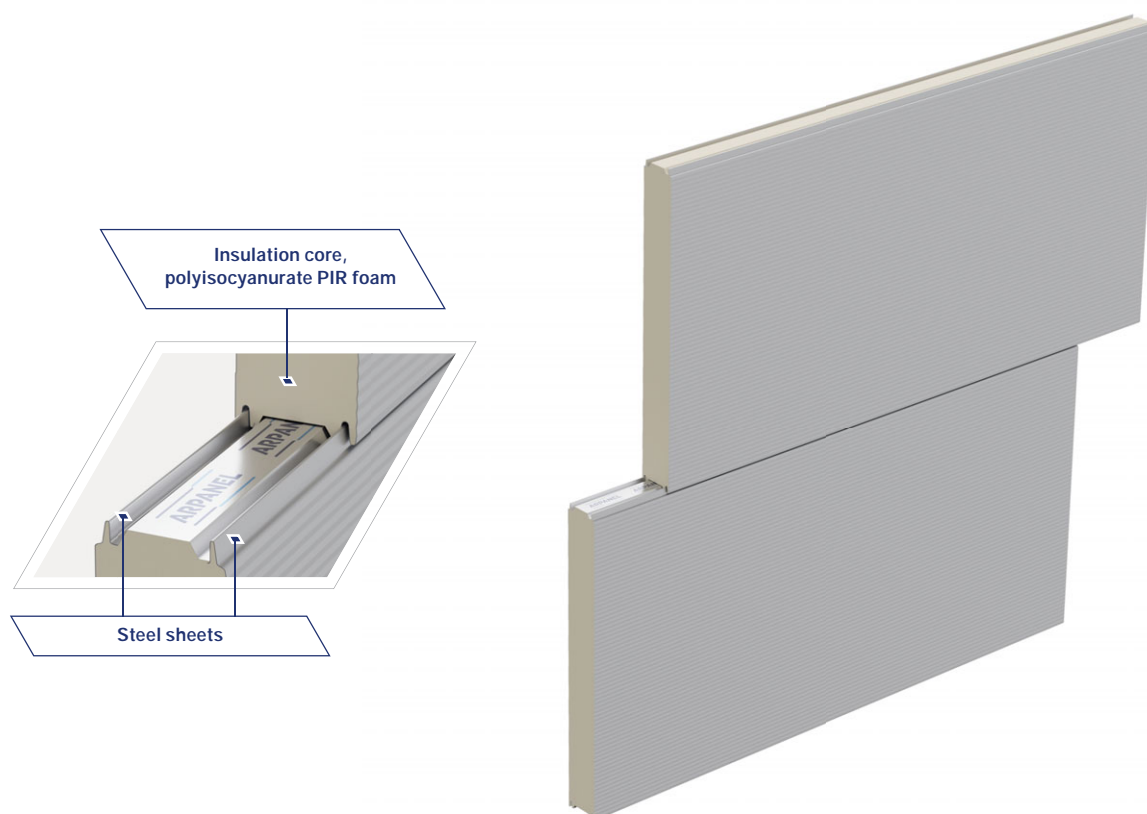
- hidden fastening system



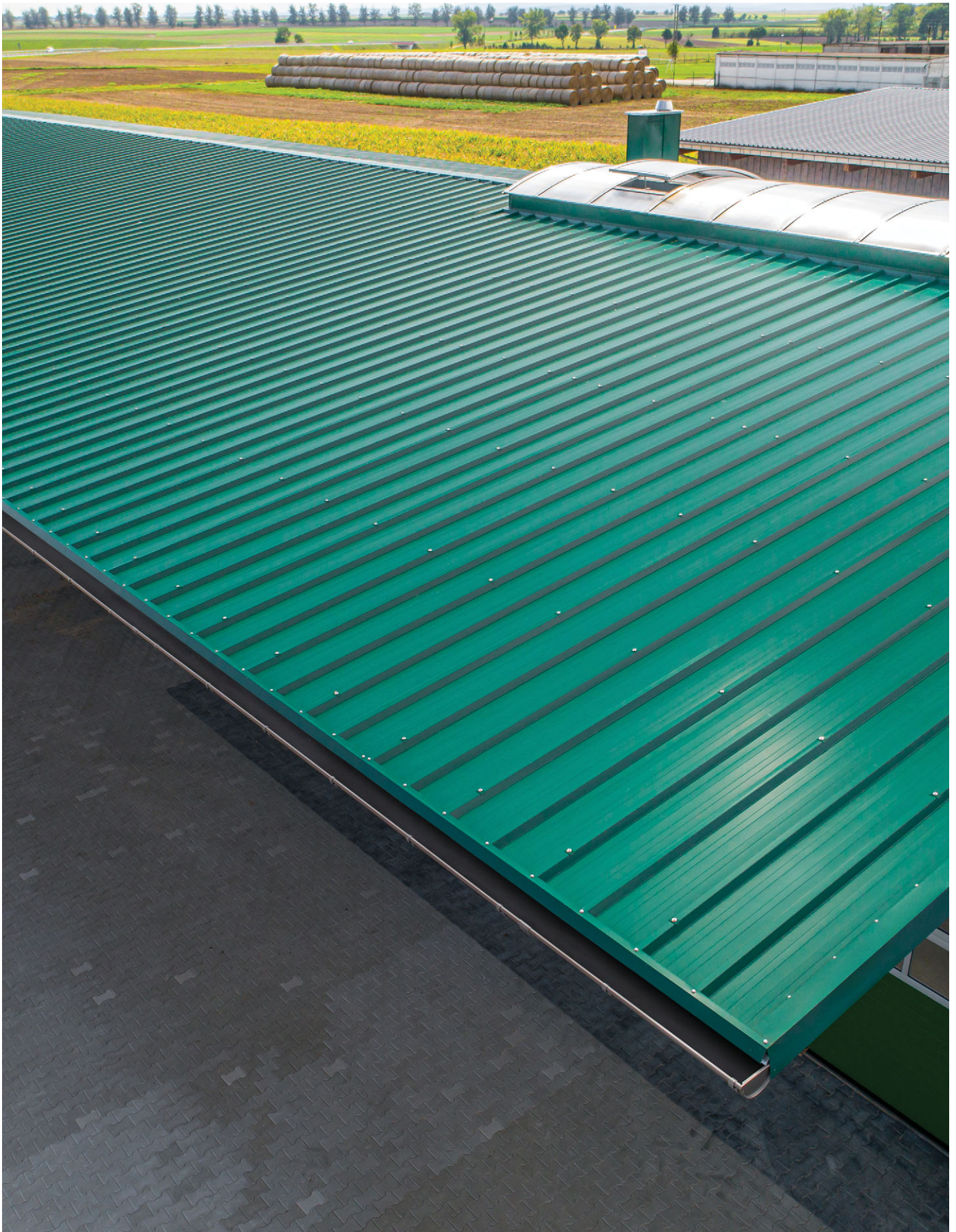
Parameters	
Name	ARPANEL SU PIR
Type of panel	wall
Insulation core	polyisocyanurate foam
Fastening system	hidden
Thickness [mm]	60 80 100 120
Module width [mm]	1000
Length [mm]	2 000 - 18 500
Standard colors of external facings	standard RAL palette



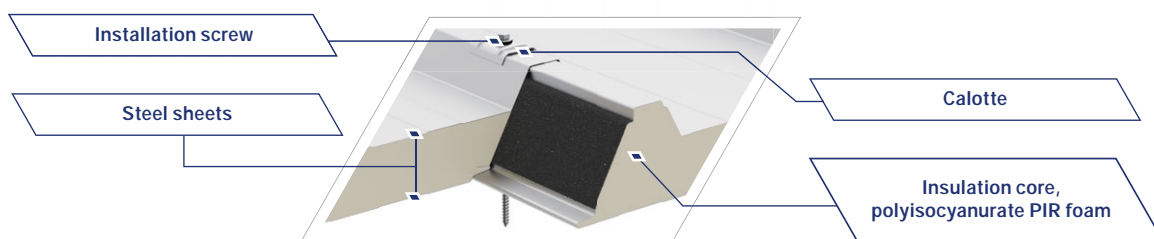
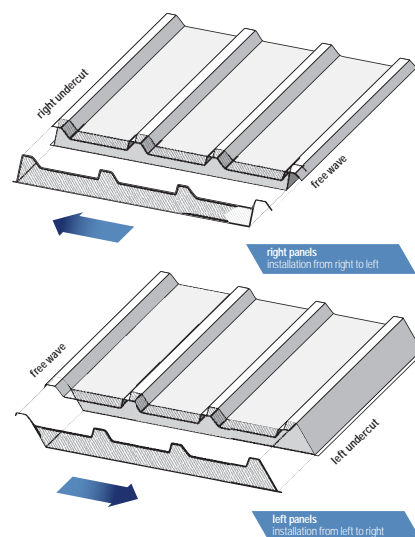
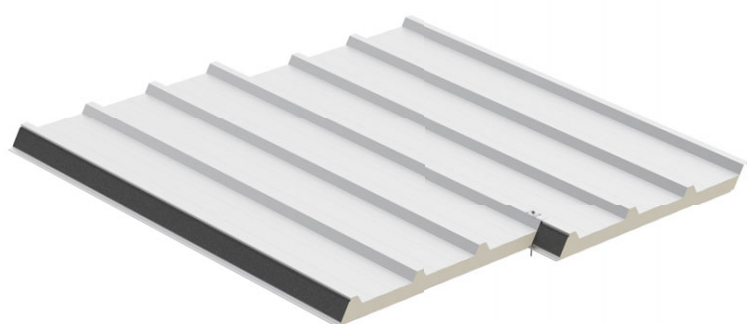
Cold store sandwich panel **ARPANEL CH PIR**



Parameters	
Name	ARPANEL CH PIR
Type of panel	wall
Insulation core	polyisocyanurate foam
Fastening system	standard
Thickness [mm]	120 140 160 200
Module width [mm]	1000 1100 1150
Length [mm]	2 000 - 18 500
Standard colors of external facings	standard RAL palette



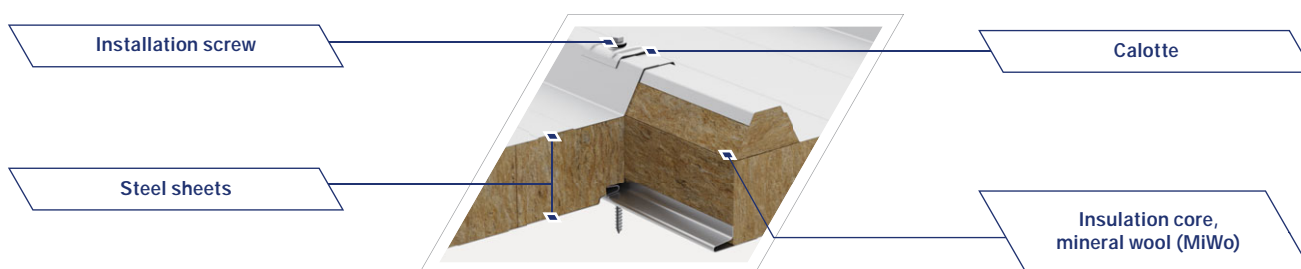
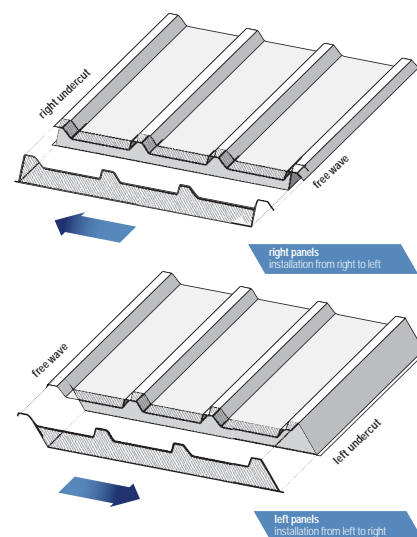
Roof sandwich panel ARPANEL D PIR



Parameters	
Name	ARPANEL D PIR
Type of panel	roof
Insulation core	polyisocyanurate foam
Fastening system	standard
Thickness [mm]	60 80 100 120 160
Module width [mm]	1000
Length [mm]	2 000 - 18 500
Standard colors of external facings	standard RAL palette



Roof sandwich panel ARPANEL D MiWo

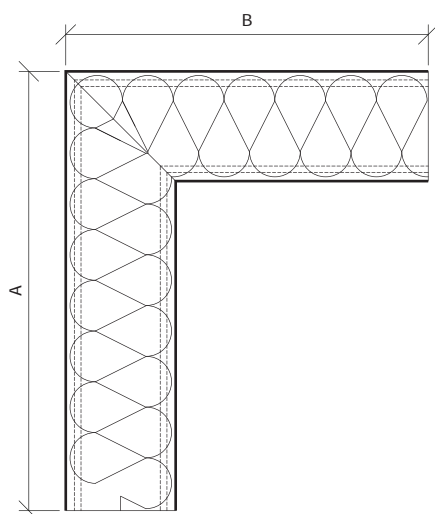
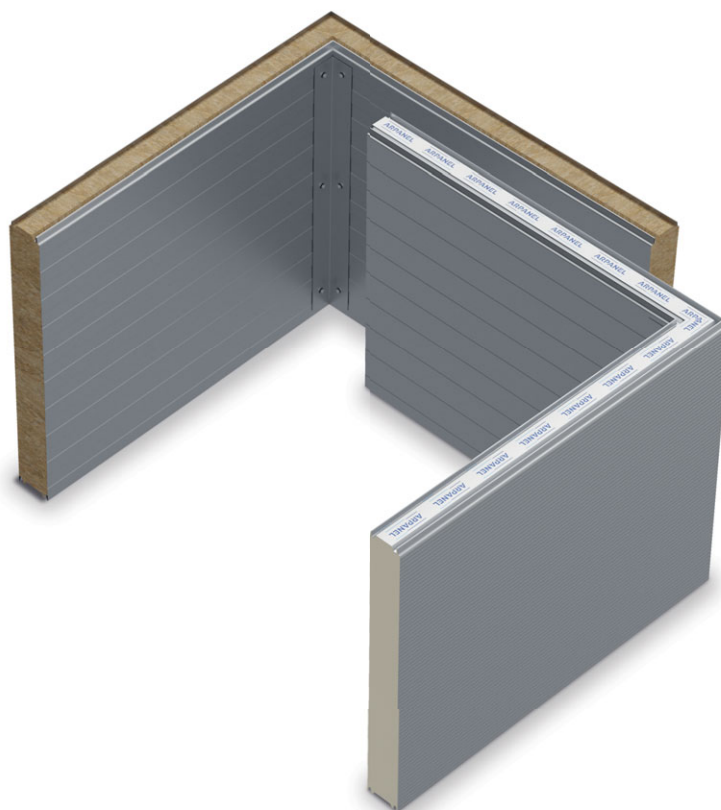


Parameters	
Name	ARPANEL D MiWo
Type of panel	roof
Insulation core	mineral wool
Fastening system	standard
Thickness [mm]	80 100 120 150 160 180 200 220* 250*
Module width [mm]	1005
Length [mm]	2 000 - 14 500
Standard colors of external facings	standard RAL palette

*The 220 mm and 250 mm thicknesses are produced by special order after consultation with the manufacturer.



Corner sandwich panel ARPANEL



Type of panel	Thickness [mm]	Dimension A+B [mm]	Dimension A or B [mm]
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 SU MiWo	100	min. 800 / max. 3000	
	120 150	min. 800 / max. 2500	
	200	min. 800 / max. 2000	
ARPANEL S PIR	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	

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 to 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	
Outside	Inside
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 e.g. steel mills, incineration plants, slaughterhouses, mushroom cultivation, smokehouses, drying rooms.
C5M Near-coastal and sea areas with large salinity.	A6 Buildings or areas with nearly continuous condensation and high pollution rate e.g. workrooms for dairy and cheese production, processing and preparation of seafood.

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 the 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			Polyester	Polyester	Polyurethane	PVC+F
Anti-corrosion classification [DIN 55928-8]			II	III	III	III
General organic density [EN 13523-1]			15	25	50	120-200
Category of corrosion resistance**	Outdoors – EN 10169-2		-	RC3	RC5	-
	Indoors – EN 10169-3		CPI2	CPI3	CPI5	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	+70
UV resistance category (ultraviolet radiation) EN 13523-10			-	Ruv2	Ruv4	-

Legend:

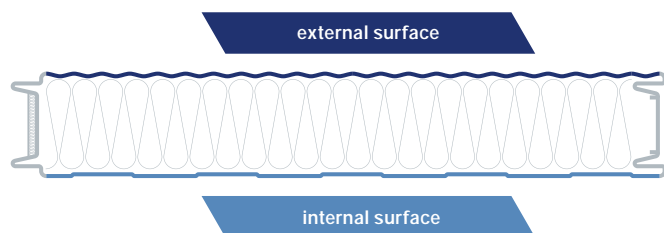
Unsuitable
 Good with exceptions
 Good
 Very good
 Very good with no exceptions

* 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.

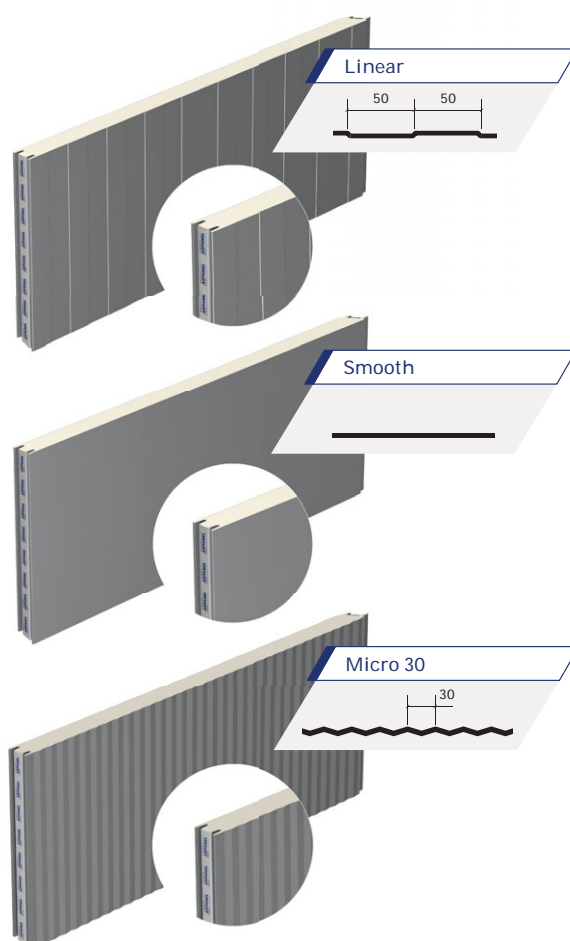
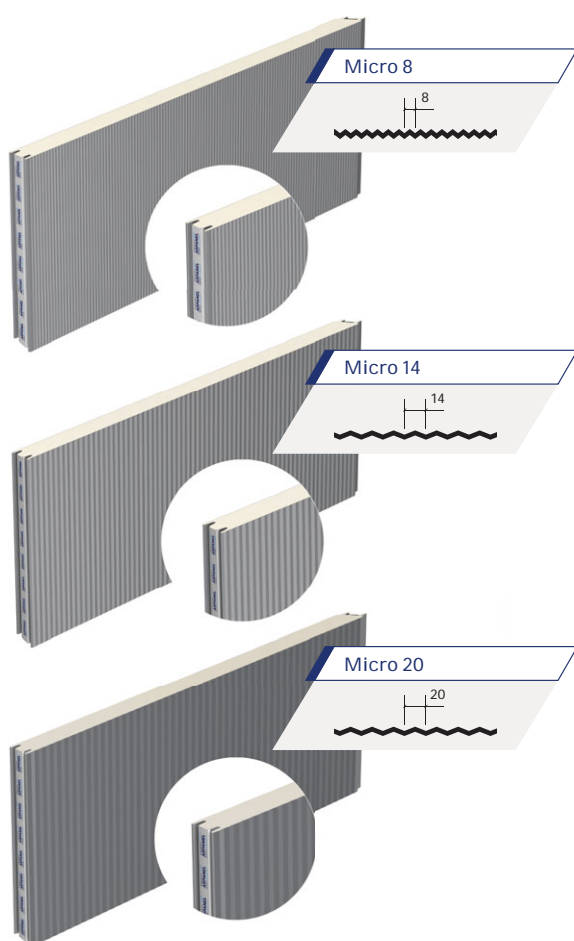
** The categories of corrosiveness depend on climate conditions inside and outside the building. Standard external climate conditions: C1, C2, C3, C4, C5-M and C5-I. Example: C3 external atmosphere – choose the steel metal sheet with RC3 or RC4 category of corrosiveness.

*** Recommended for use north of the 48th parallel and at a max. temp. of 70°C

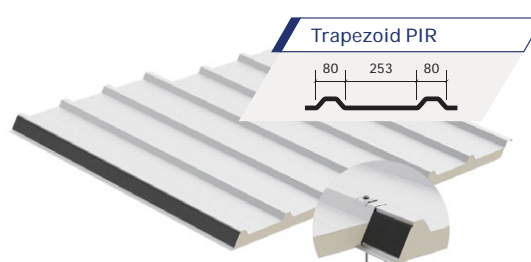




Profilation	External surface	Internal surface
Linear	YES	YES
Smooth	YES	YES
Micro 14	YES	NO
Micro 8	YES	NO
Micro 20	NO	YES
Micro 30	YES	NO



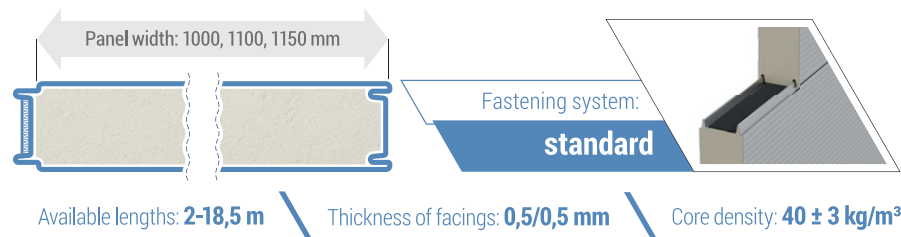
Roof profile



Technical parameters of ARPANEL sandwich panels

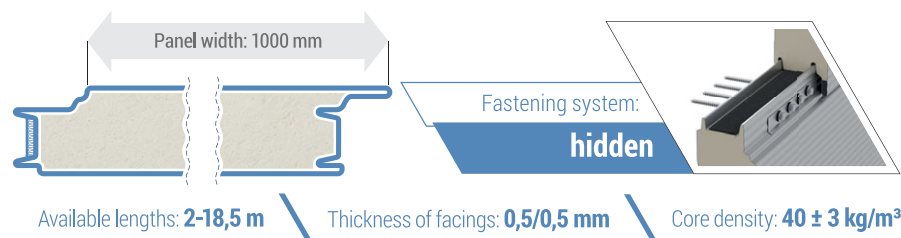
Panel thickness [mm]	Weight [kg/m ²]	Heat transfer coefficient $U_{d,s}$ [W/m ² *K]	Fire resistance class					Proper acoustic insulation R_w (C _p) [dB]	Sound absorption α_w
			WG PN-B-02867	EN 13501-1	EN 13501-2	EN 13501-2:2016 Ceiling	EN 13501-5		

Wall sandwich panel ARPANEL S PIR - standard fastening system



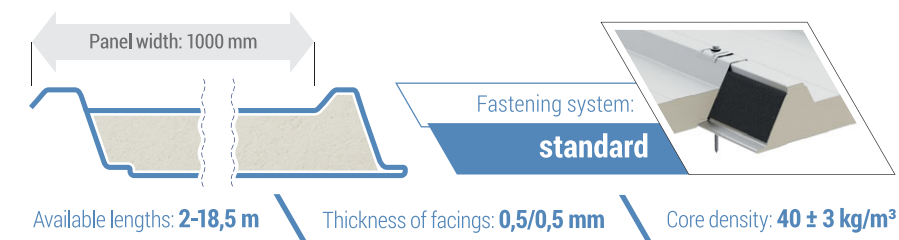
60	10,4	0,37	NRO	B-s1,d0	E 15 / EI 15	EI 15	not applicable	25 (-2; -4)	0,15
80	11,2	0,27			E 20 / EI 20				
100	11,9	0,22			E 30 / EI 30				

Wall sandwich panel ARPANEL SU PIR - hidden fastening system



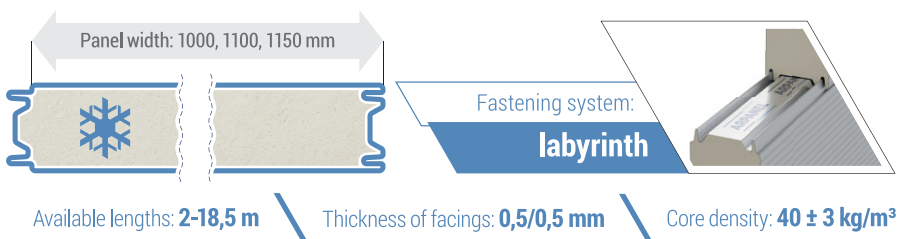
60	10,8	0,40	NRO	B-s1,d0	NPD	NPD	not applicable	25 (-2; -4)	0,15
80	11,6	0,29			E 30 / EI 20				
100	12,4	0,23			E 30 / EI 30				
120	13,2	0,19							

Roof sandwich panel ARPANEL D PIR



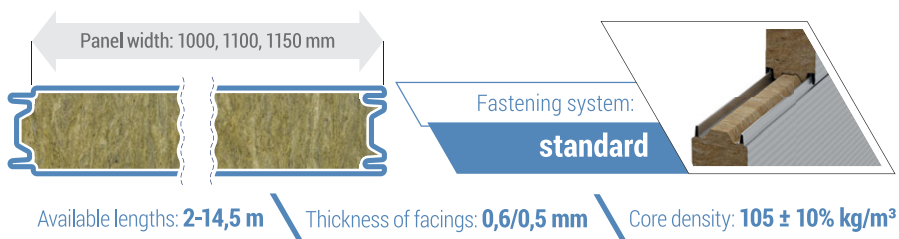
60/100	10,6	0,33	not applicable	B-s2,d0	REI 15 / RE 20	not applicable	Broof(t1)	25 (-1;-4)	0,15
80/120	11,3	0,26			REI 30/RE 30		Broof(t1),(t3)		
100/140	12,1	0,21					Broof(t1)		
120/160	12,9	0,18					Broof(t1)	NPD	NPD
160/200	14,4	0,13					Broof(t1)	NPD	NPD

Cold store sandwich panel ARPANEL CH PIR



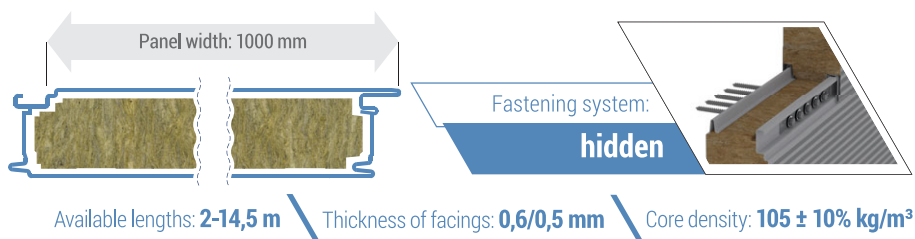
120	12,6	0,17*	NRO	B-s1,d0	E 60 / EI 30	NPD	not applicable	24 (-2;-4)	0,15
140	13,4	0,15*							
160	14,2	0,13*							
200	15,7	0,10*			E 60 / EI 60				

Wall sandwich panel ARPANEL S MiWo - standard fastening system



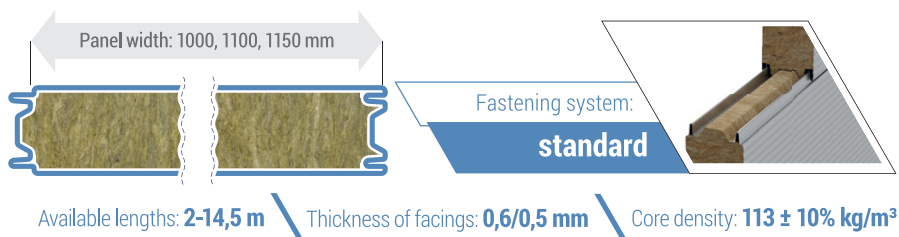
80	17,5	0,48	NRO	A2-s1,d0	E 60 / EI 60	NPD	not applicable	30 (-1;-2)	0,15
100	19,6	0,39			E 120 / EI 60	EI 30		32 (-1, -3)	
120	21,8	0,32			E 120 / EI 120	EI 120		32 (-2;-4)	
150	25,0	0,26			E 240 / EI 240			32 (-3;-5)	
160	26,1	0,24						31 (-1;-3)	
180	28,3	0,22						NPD	
200	30,4	0,20						NPD	
220**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

Wall sandwich panel ARPANEL SU MiWo - hidden fastening system



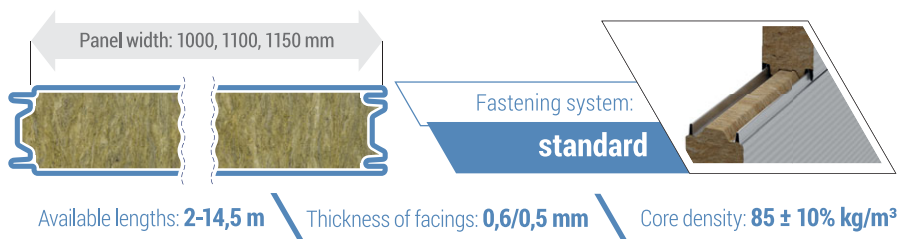
100	20,5	0,39	NRO	A2-s1,d0	E 30/EI 30	NPD	not applicable	31 (-2; -3)	0,35			
120	22,6	0,32			E 45 / EI 45			30 (-2; -4)				
150	25,9	0,26										
200	31,3	0,20										
242**	35,8	0,16			E 120/EI 120							

Wall sandwich panel ARPANEL S MiWo MXL - standard fastening system



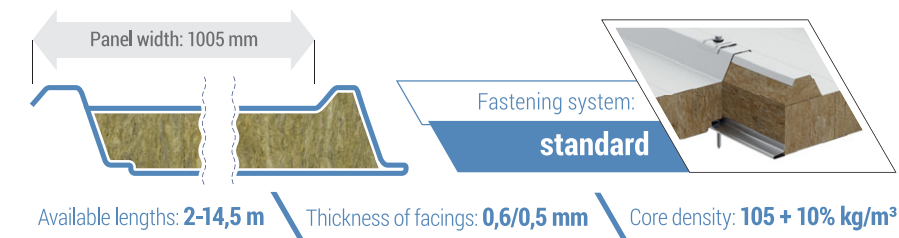
100	20,3	0,40	NRO	A2-s1,d0	E 120 / EI 60	NPD	not applicable	31 (-1; -3)	0,15
120	22,6	0,33			E 120 / EI 120			31 (-2; -3)	
150	26,1	0,27			E 240 / EI 240				
160	27,2	0,25							
180	29,5	0,22							
200	31,8	0,20							

Wall sandwich panel ARPANEL S MiWo Lt - standard fastening system



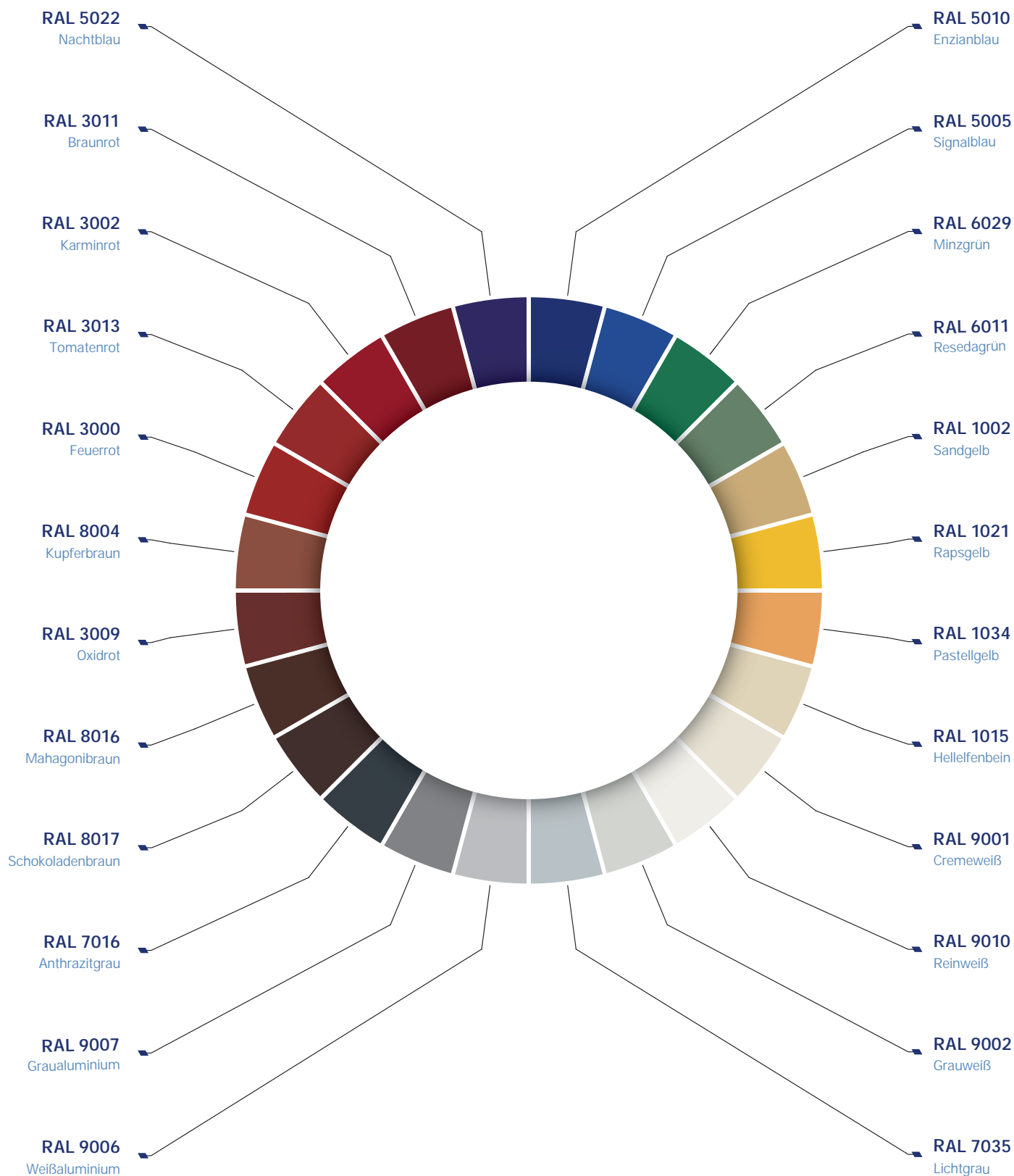
80	16,1	0,46	NRO	A2-s1,d0	NPD	NPD	not applicable	NPD	NPD
100	17,8	0,37			E 45 / EI 45				
120	19,5	0,31							
150	22,0	0,25							
160	22,9	0,23							
180	24,6	0,21							
200	26,3	0,19			E 180 / EI 120				

Roof sandwich panel ARPANEL D MiWo



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					Broof (t1),(t3)
120/160	23,1	0,32								
150/190	26,3	0,26					Broof (t1),(t3)			
160/200	27,4	0,24						Broof (t1)		NPD
180/220	29,6	0,22								
200/240	31,8	0,20								
220/260**	33,9	0,18								
250/290**	37,2	0,16								

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



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



Please consider the environment
before printing this catalogue.

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