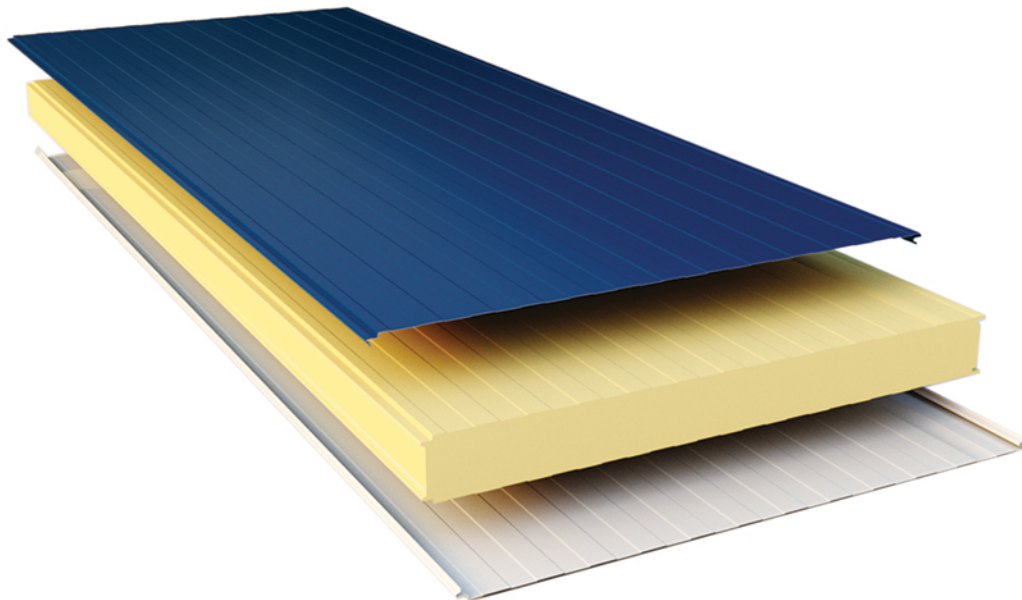


## MULTI-LAYER "SANDWICH" PANELS



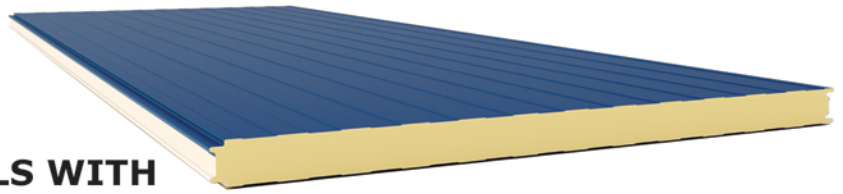
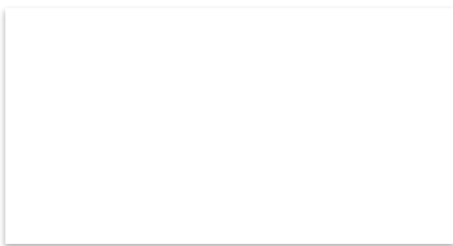
Polyisocyanurate (PIR) or mineral wool (MW) insulation core

Resistant to corrosive factors

Outstanding thermal insulation

Availability in different colours and coatings

Excellent fire safety characteristics  
(fire resistance and reaction to fire)



## MULTI-LAYER SANDWICH PANELS WITH POLYISOCYANURATE (PIR) INSULATION CORE

### STANDARD WALL PIR PANEL

Filling density: 40 kg/m<sup>3</sup>

$\lambda$  : 0,022 W/m\*K

#### TECHNICAL PARAMETERS

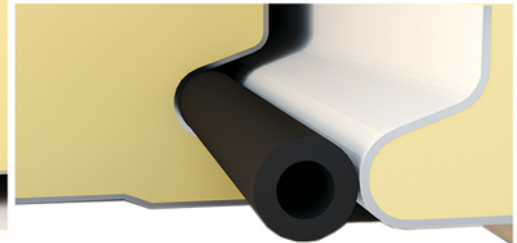
Thickness [mm]	50	80	100
Length [mm]	2000-14000		
Modular width [mm]	1000/ 1100/ 1150/ 1200		
U (PIR), W/m <sup>2</sup> *K	0,44	0,28	0,22
R (PIR), m <sup>2</sup> K/W	2,27	3,63	4,54
Fire reaction class	B-s2, d0	b-s2, d0	b-s1, d0
Fire resistance	-	-	EI15



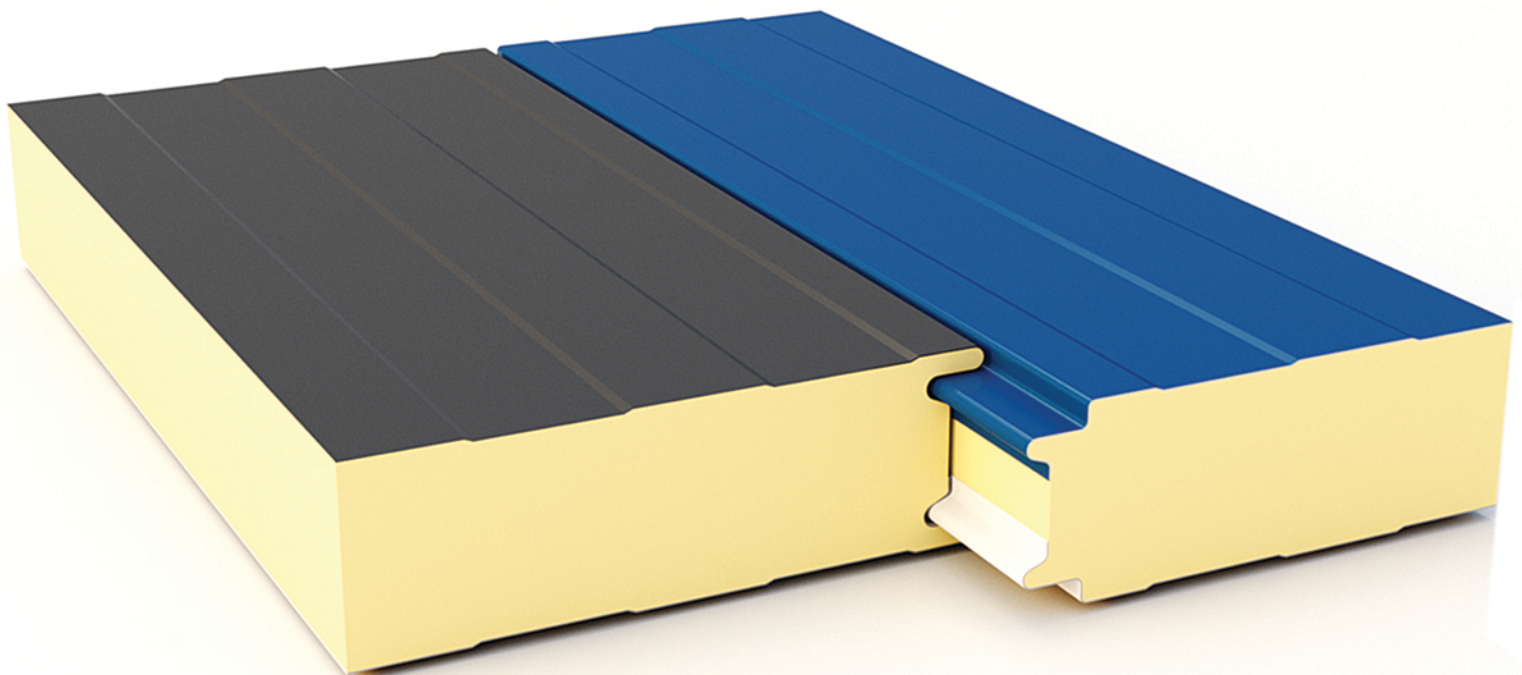
**Exterior metal sheet thickness**  
0,50-0,70 mm

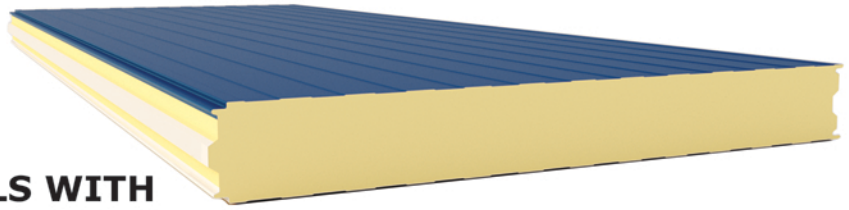
**Interior metal sheet thickness**  
0,40-0,60 mm

**Available steel coatings**  
PE, PVDF, PUR, Foodsafe



*optional sealing gasket in the lock*





**MULTI-LAYER SANDWICH PANELS WITH POLYISOCYANURATE (PIR) INSULATION CORE**

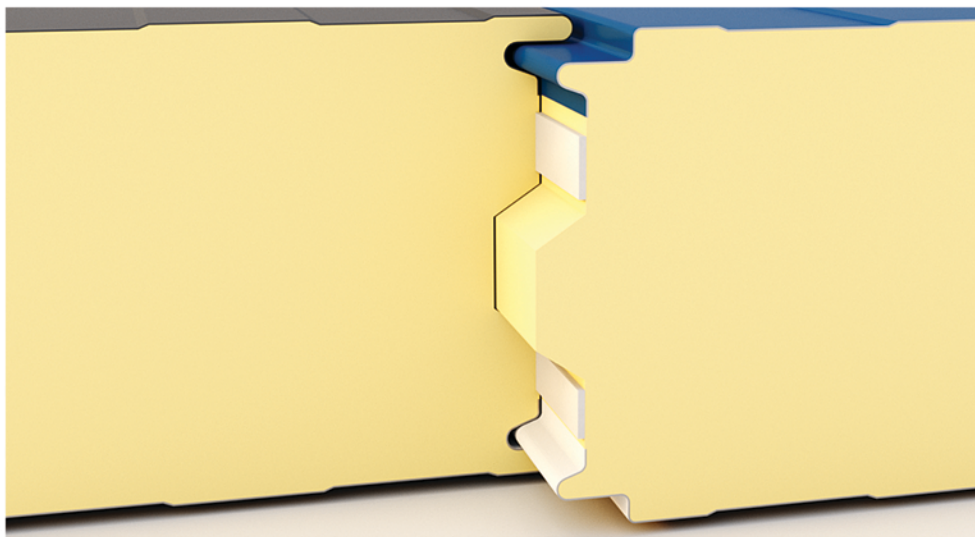
**WALL PIR PANELS WITH THERMO LOCK**

**Filling density: 40 kg/m<sup>3</sup>**

**λ : 0,022 W/m\*K**

**TECHNICAL PARAMETERS**

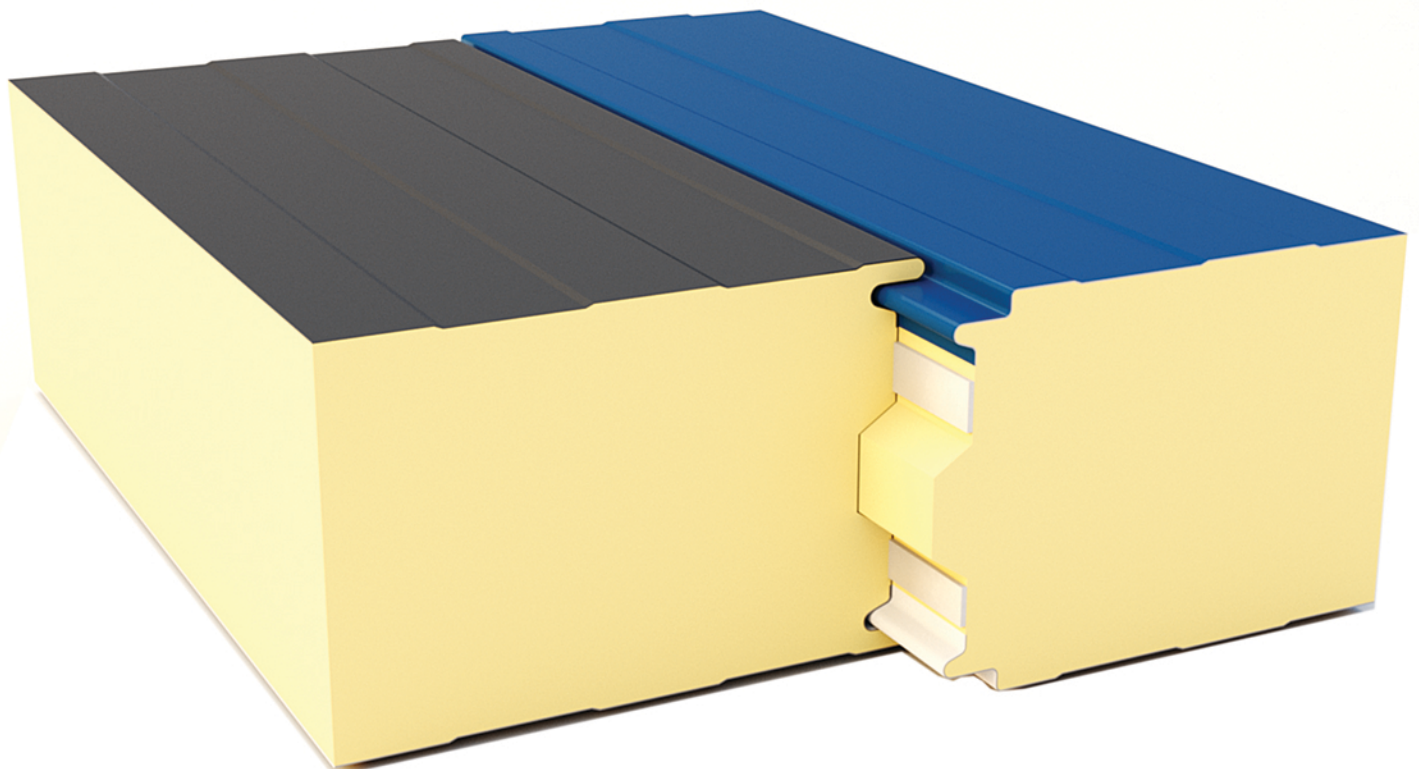
Thickness [mm]	120	140	150	160	180	200
Length [mm]	2000-14000					
Modular width [mm]	1000/ 1100/ 1150/ 1200					
U (PIR), W/m <sup>2</sup> *K	0,18	0,16	0,15	0,14	0,12	0,11
R (PIR), m <sup>2</sup> K/W	5,45	6,36	6,81	7,27	8,18	9,09
Fire reaction class	b-s1, d0					
Fire resistance	EI30					

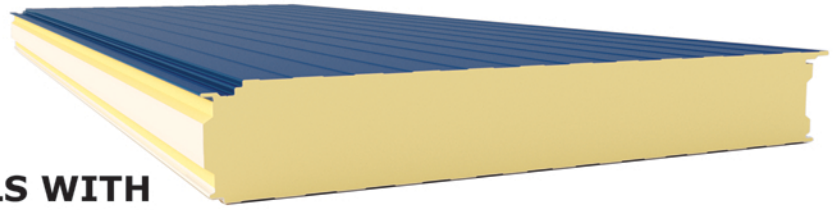


**Exterior metal sheet thickness**  
0,50-0,70 mm

**Interior metal sheet thickness**  
0,40-0,60 mm

**Available steel coatings**  
PE, PVDF, PUR, Foodsafe





## MULTI-LAYER SANDWICH PANELS WITH POLYISOCYANURATE (PIR) INSULATION CORE

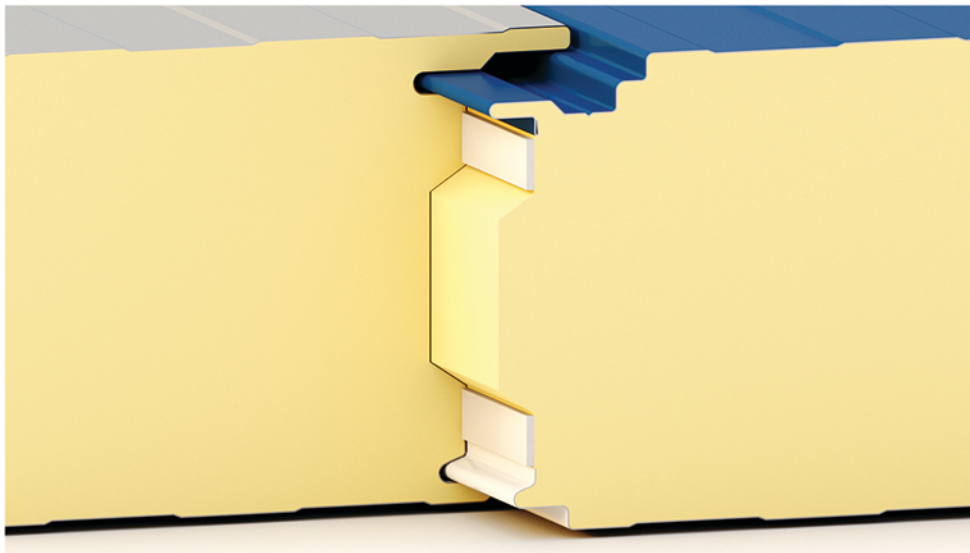
### WALL PIR PANELS WITH HIDDEN FASTENING

Filling density: 40 kg/m<sup>3</sup>

$\lambda$  : 0,022 W/m\*K

#### TECHNICAL PARAMETERS

Thickness [mm]	50	80	100	120	150
Length [mm]	2000-14000				
Modular width [mm]	1000				
U (PIR), W/m <sup>2</sup> *K	0,44	0,27	0,22	0,18	0,15
R (PIR), m <sup>2</sup> K/W	2,27	3,63	4,54	5,45	6,81
Fire reaction class	b-s2, d0				
Fire resistance	-	-	EI15	EI15	EI15



**Exterior metal sheet thickness**

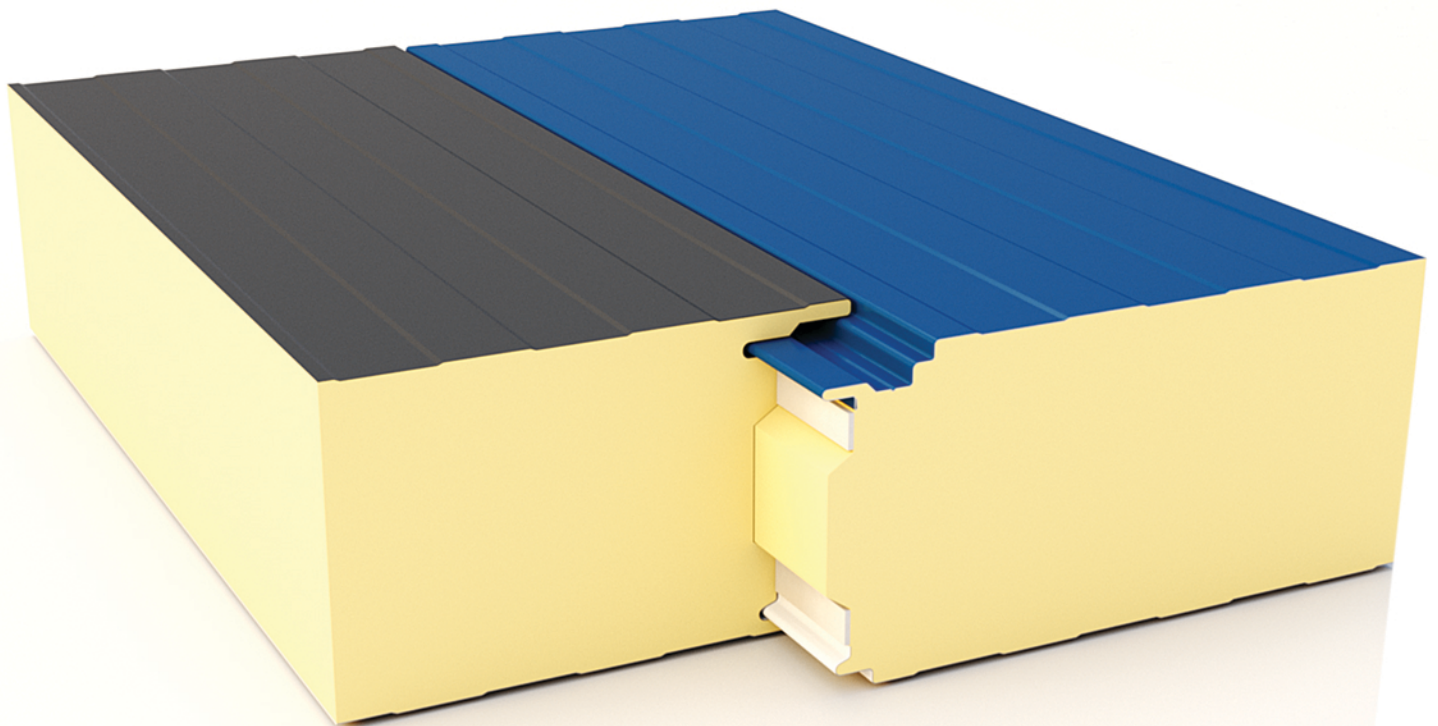
0,50-0,70 mm

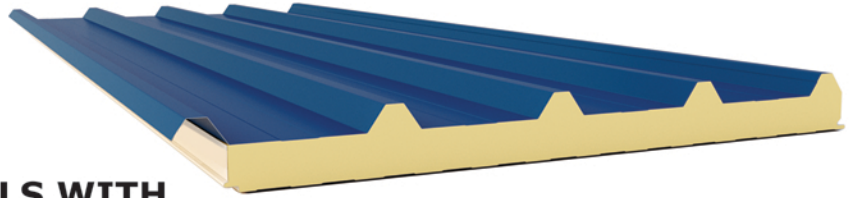
**Interior metal sheet thickness**

0,40-0,60 mm

**Available steel coatings**

PE, PVDF, PUR, Foodsafe





**MULTI-LAYER SANDWICH PANELS WITH  
POLYISOCYANURATE (PIR) INSULATION CORE**

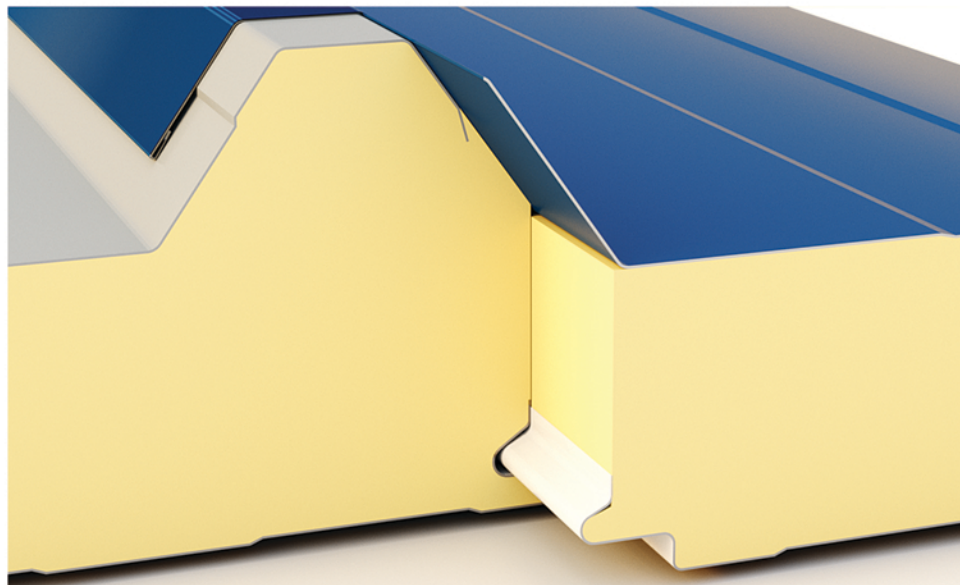
**PIR ROOF PANELS (5 ribs)**

**Filling density: 40 kg/m<sup>3</sup>**

**$\lambda$  : 0,022 W/m\*K**

**TECHNICAL PARAMETERS**

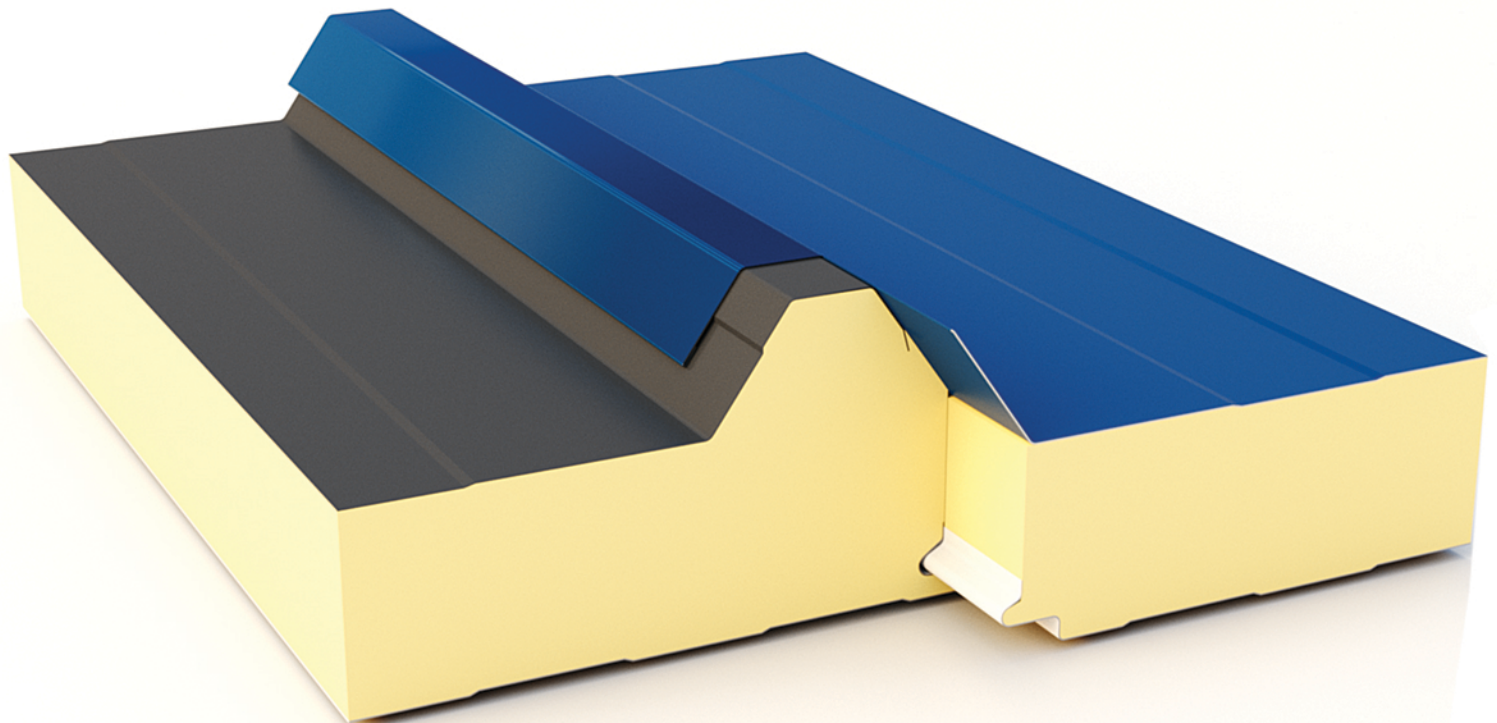
Thickness [mm]	40	80	100	120	150
Length [mm]	2000-14000				
Modular width [mm]	1000				
U (PIR), W/m <sup>2</sup> *K	0,55	0,27	0,22	0,18	0,15
R (PIR), m <sup>2</sup> K/W	1,81	3,63	4,54	5,45	6,81
Fire reaction class	b-s3, d0	b-s3, d0	b-s2,d0	b-s2,d0	b-s2,d0
Fire resistance	-	-	REI30	REI30	REI30

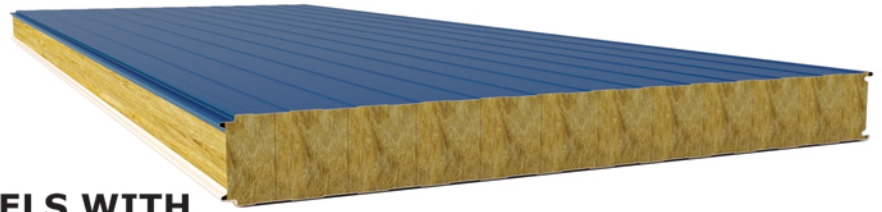


**Exterior metal sheet thickness**  
0,50-0,70 mm

**Interior metal sheet thickness**  
0,40-0,60 mm

**Available steel coatings**  
PE, PVDF, PUR, Foodsafe





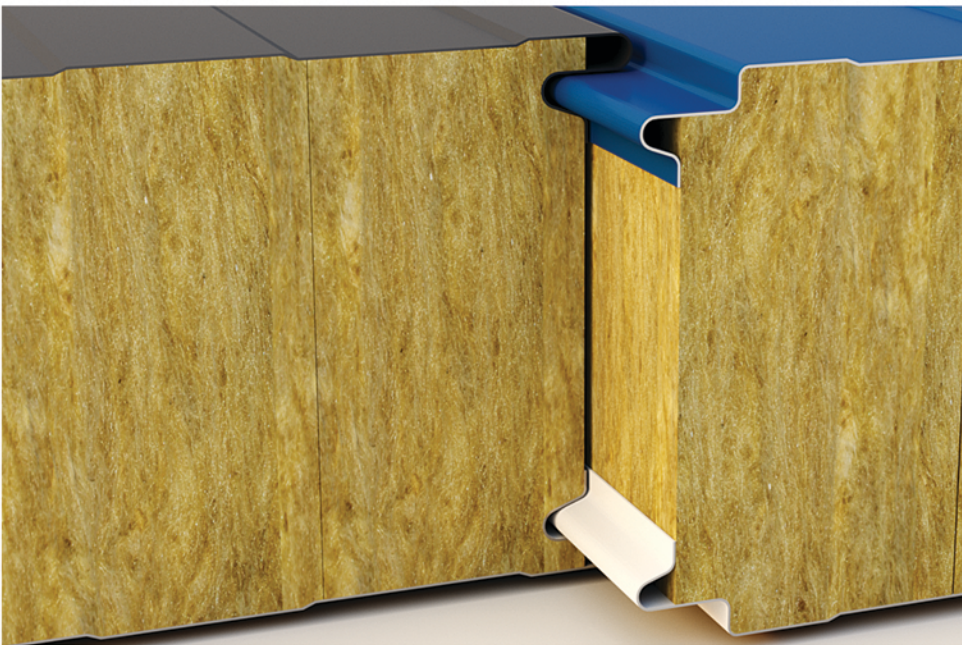
**MULTI-LAYER SANDWICH PANELS WITH MINERAL WOOL (MW) INSULATION CORE**

**MW WALL PANELS**

**Filling density: 115 kg/m<sup>3</sup>**  
 **$\lambda$  : 0,040 W/m\*K**

**TECHNICAL PARAMETERS**

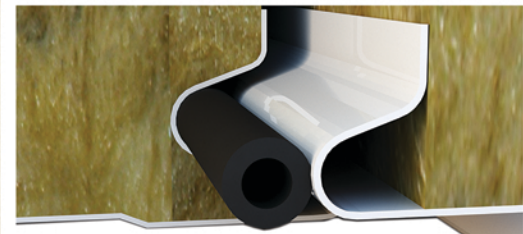
Thickness [mm]	50	80	100	120	150	200	230
Length [mm]	2000-14000						
Modular width [mm]	1000/ 1100/ 1200						
U-value, W/m <sup>2</sup> *K	0,80	0,50	0,40	0,33	0,27	0,20	0,17
R-value, m <sup>2</sup> K/W	1,25	2,00	2,50	3,00	3,70	5,00	6,00
Fire reaction class	A2-s1, d0						
Fire resistance	-	-	EI60	EI60	EI120	EI120	EI120



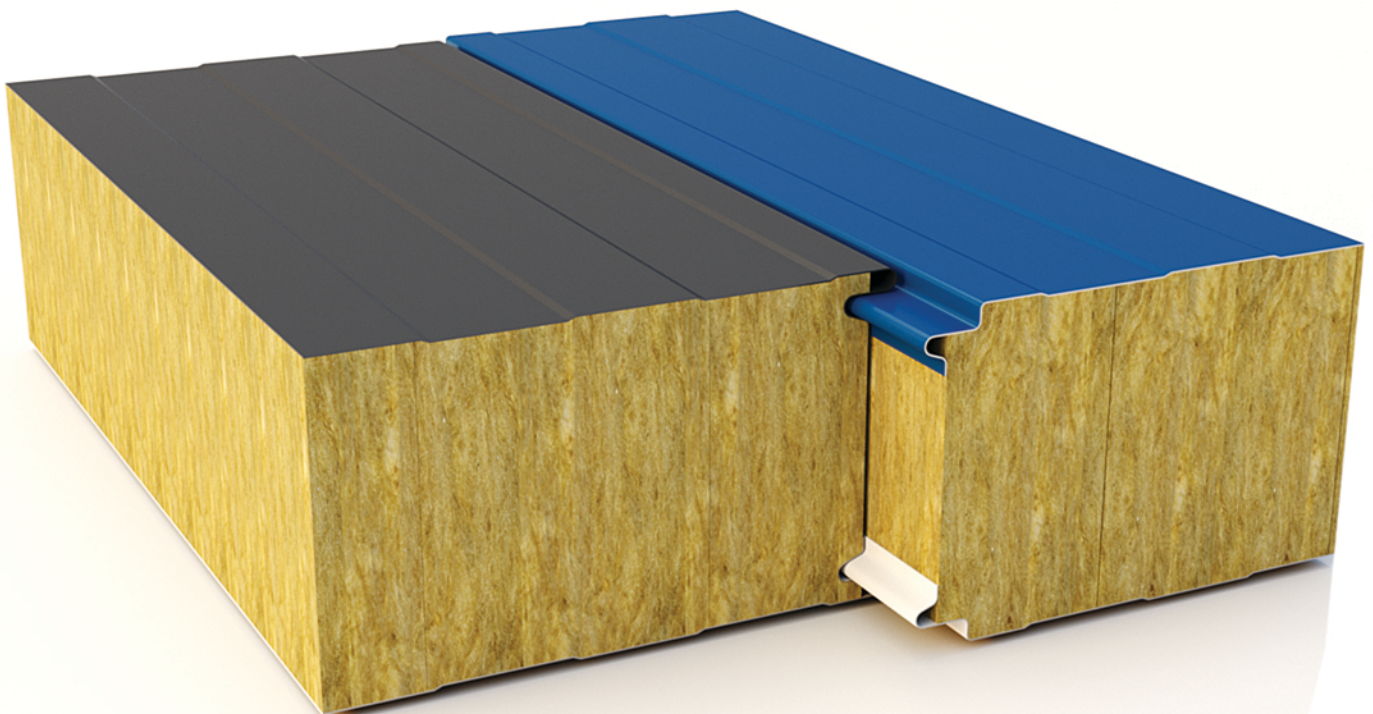
**Exterior metal sheet thickness**  
0,50-0,70 mm

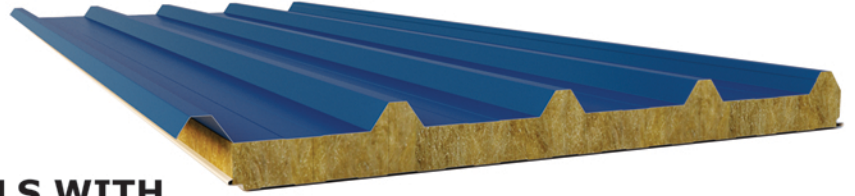
**Interior metal sheet thickness**  
0,40-0,60 mm

**Available steel coatings**  
PE, PVDF, PUR, Foodsafe



*optional sealing gasket in the lock*





**MULTI-LAYER SANDWICH PANELS WITH MINERAL WOOL (MW) INSULATION CORE**

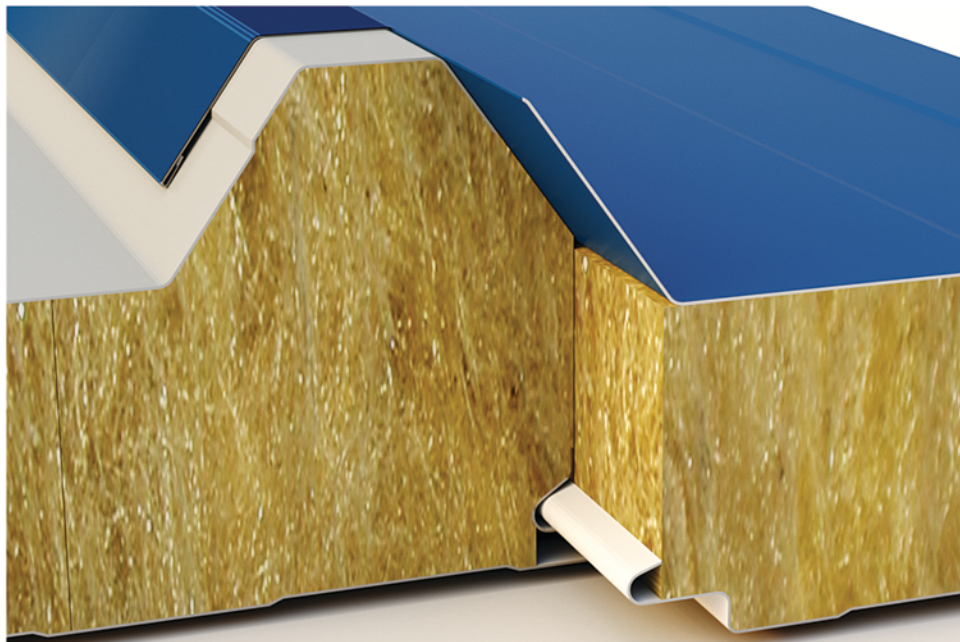
**PIR ROOF PANELS (5 ribs)**

**Filling density: 115 kg/m<sup>3</sup>**

**$\lambda$  : 0,040 W/m\*K**

**TECHNICAL PARAMETERS**

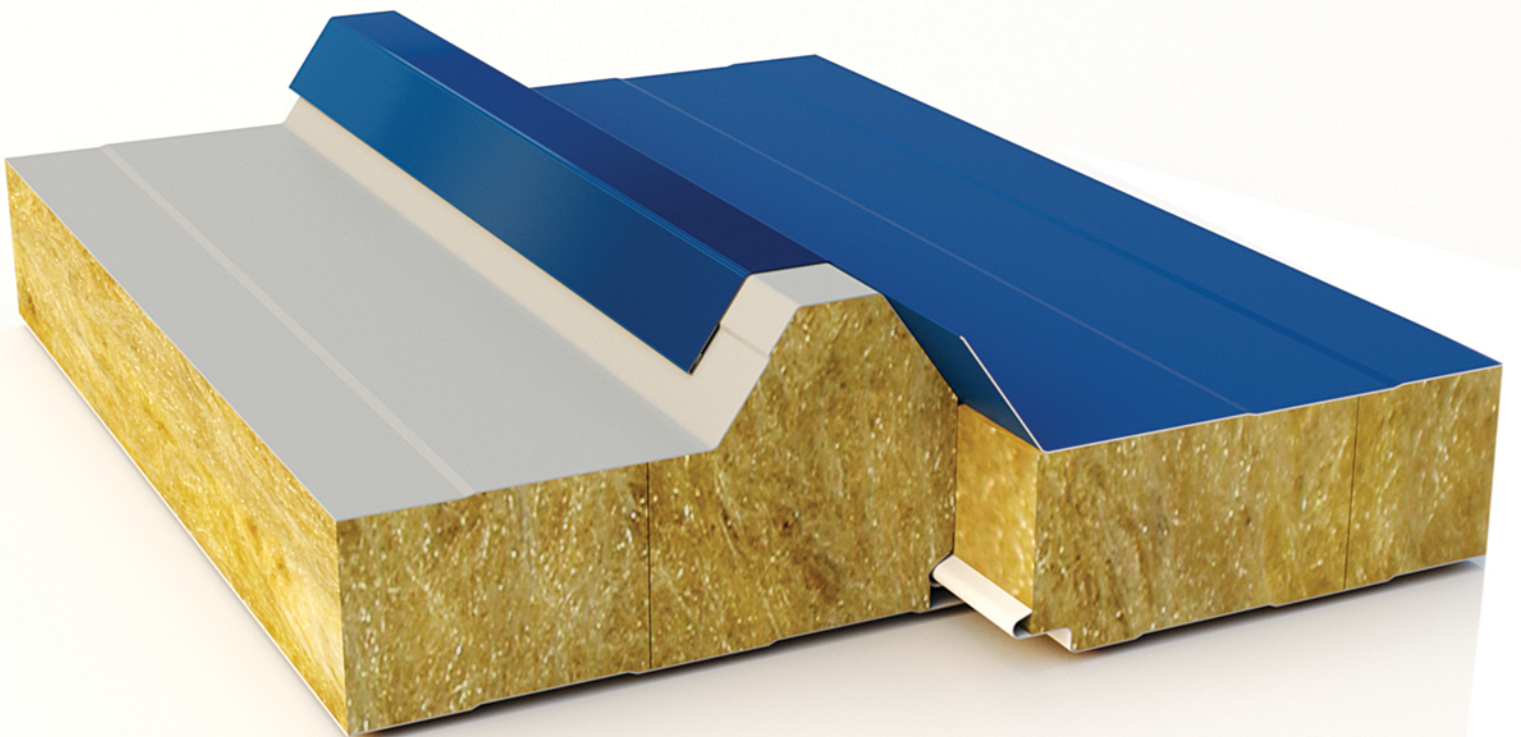
Thickness [mm]	80	100	120	150
Length [mm]	2000-14000			
Modular width [mm]	1000			
U-value, W/m <sup>2</sup> *K	0,50	0,40	0,33	0,27
R-value, m <sup>2</sup> K/W	2,00	2,50	3,00	3,70
Fire reaction class	A2-s1, d0			
Fire resistance	REI90			



**Exterior metal sheet thickness**  
0,50-0,70 mm

**Interior metal sheet thickness**  
0,40-0,60 mm

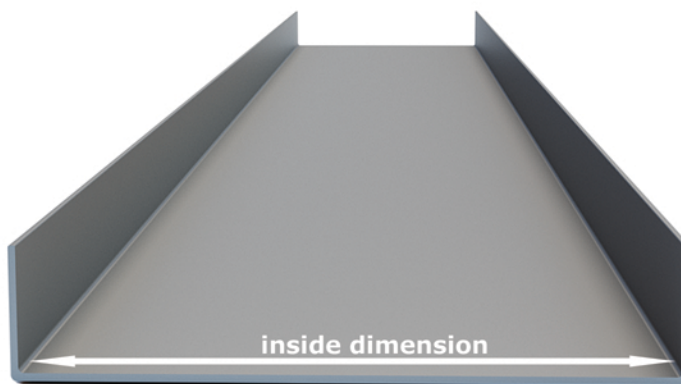
**Available steel coatings**  
PE, PVDF, PUR, Foodsafe



## THERMO PROFILES FOR HORIZONTAL WALL PANEL INSTALLATION

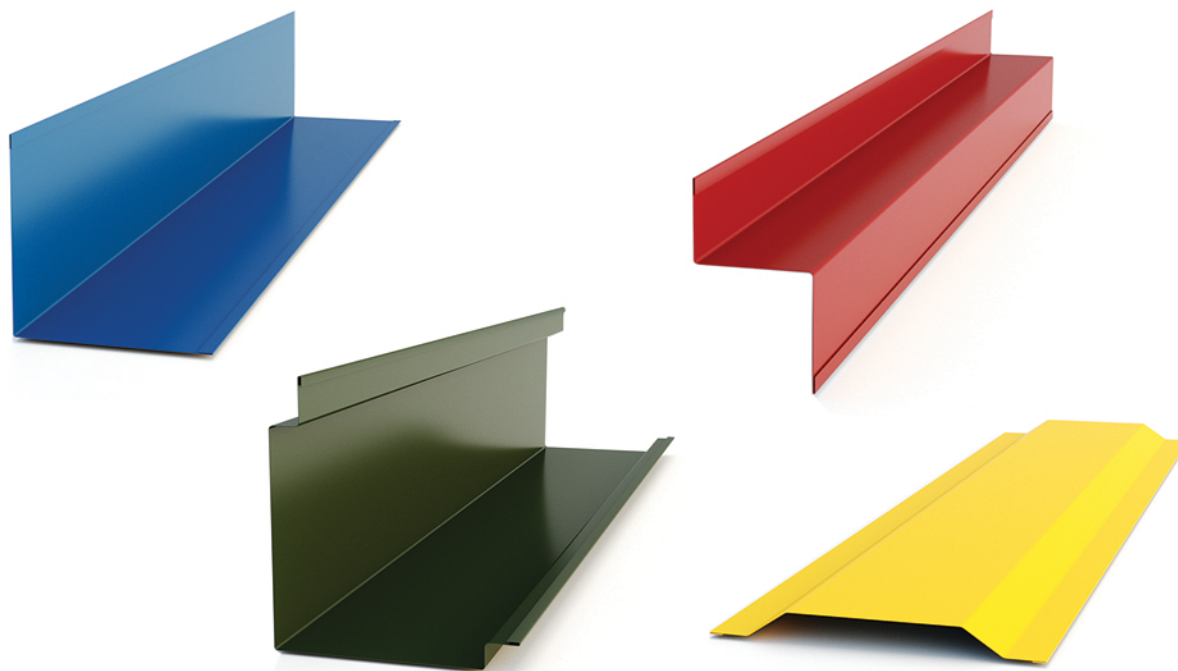
Panel thickness	Inside dimension	Profile height	Steel thickness
50	28	20-50	1-1,5
80	58	20-50	1-1,5
100	78	20-50	1-1,5
120	98	20-50	1-1,5
140	118	20-50	1-1,5
150	128	20-50	1-1,5
160	138	20-50	1-1,5
180	158	20-50	1-1,5
200	178	20-50	1-1,5
230	208	20-50	1-1,5

*all dimensions given in milimeters*



## STANDARD FLASHINGS FOR DECORATING SANDWICH PANELS

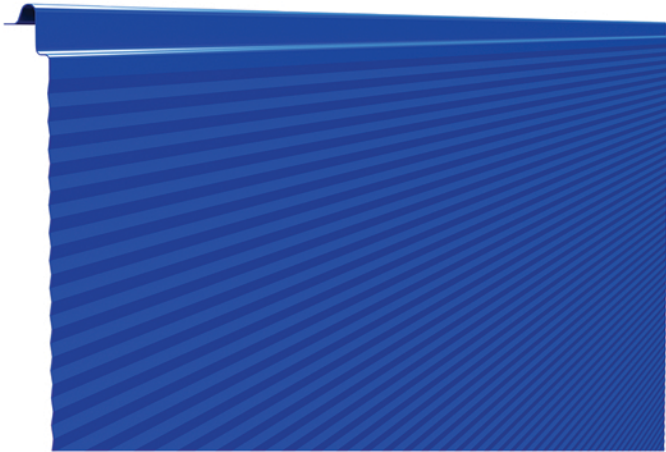
*Hallgruppen will supply all the required flashings for the project in order to match the panel's colour  
Flashings up to 3 meters length*



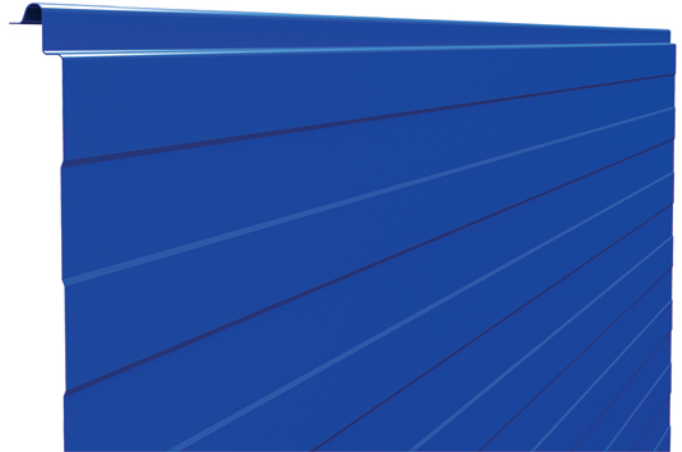


## STEEL PROFILING

Linear and micro profiling is available on exterior facing  
Linear profiling is available on interior facing



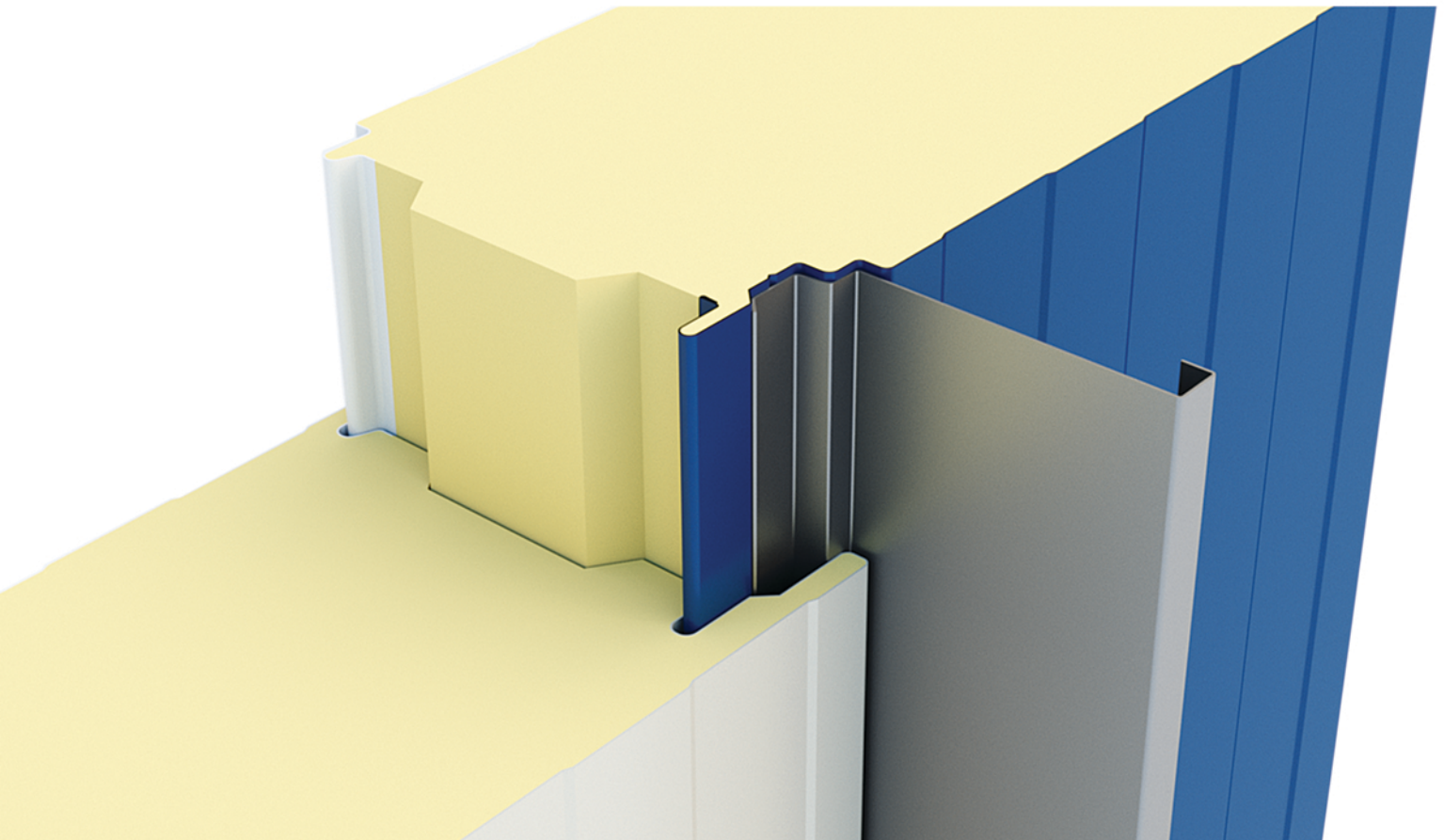
**MICRO**



**LINEAR**

## ADDITIONAL FACADE CLADDING

**Hallgruppen** is offering a new additional facade cladding profile which can be mounted on wall PIR panels with hidden fastening. This profile allows to mount heavy facade systems which is unable to be installed directly on sandwich panels.



## STANDARD COLOURS

*other colours available upon request*

RAL 9010

RAL 9002

RAL 9006

RAL 9007

RAL 7035

RAL 7040

RAL 7024

RAL 1015

RAL 1021

RAL 3011

RAL 8017

RAL 6020

RAL 5010

## PANEL MOUNTING ACCESORIES

*Sealing tape between panels and structures - **Illac 10/3***

*Hydroisolation between socle and thermo profile - **aluminium-butyl tape***

*Low expansion mounting foam - **Illbruck FM343***

**aluminium-butyl tape**



**mounting foam**



**Illac 10/3**

