

Application industries: slaughter plants and breeding farms, such as pig farms, cattle farms, chicken farms and other industries with corrosive gases.

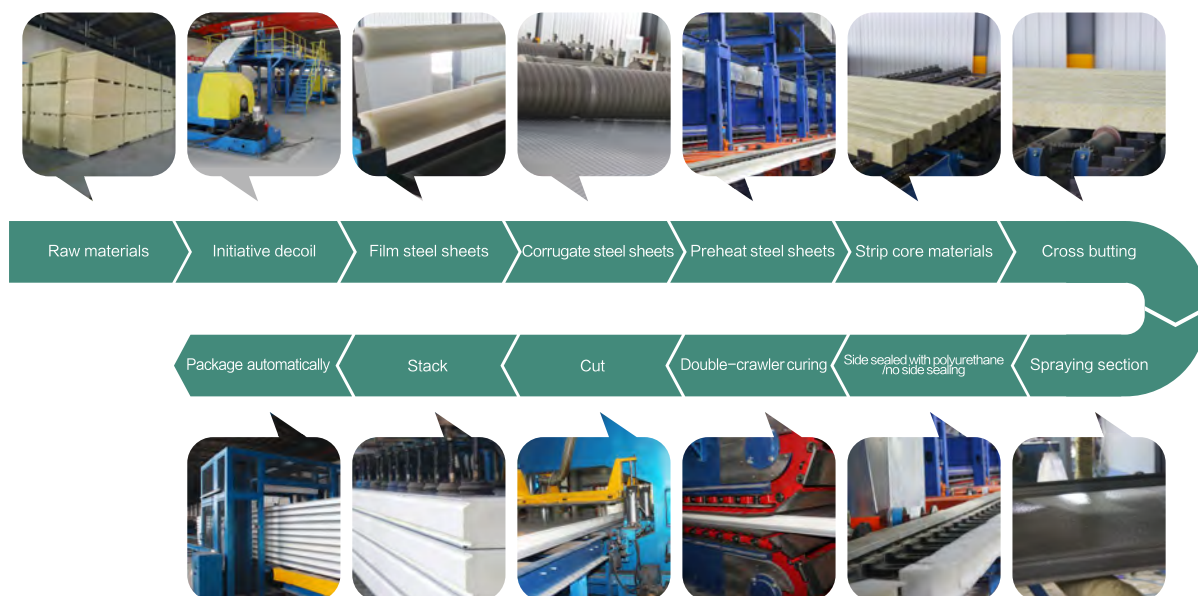


PNS Brand Rockwool /Glasswool Sandwich Wall Panel Series

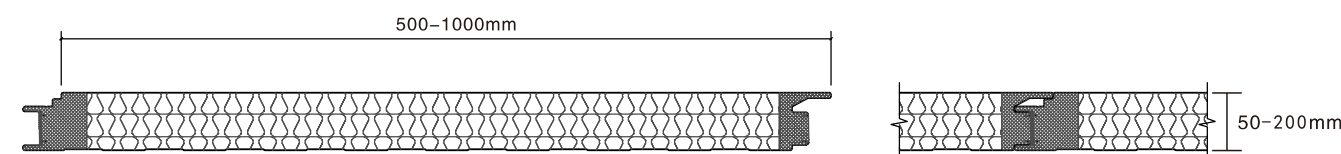
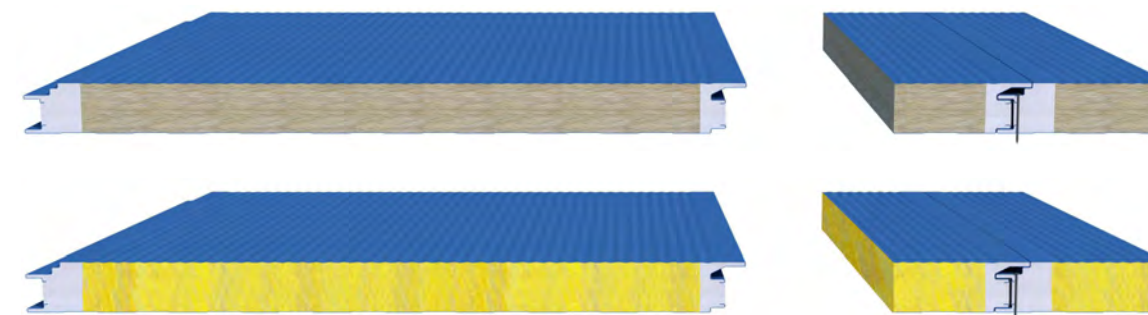
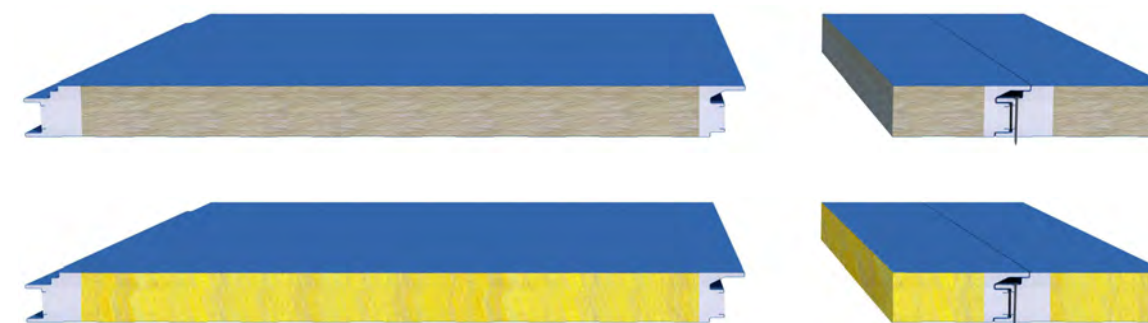
Product Introduction:

PNS select high-quality color coated galvanized (or other metal materials) or aluminum or stainless steel as the panel metal sheet. After the roll forming, cut the rockwool /glasswool into strips and then turn 90 degree (make the fiber perpendicular to the metal surface), then bond with the metal plate together by the high-strength, high bond strength, high fireproof binder. at the last, seal the high-density rigid polyurethane(PU) or PIR foam in the two edges, and the nice smooth tough panel is complete.

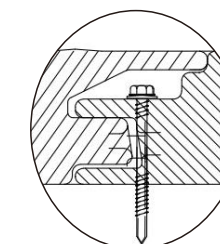
Production Procedure:



Rockwool /Glasswool Exterior Wall Sandwich Panel (seamless)



The wall panel is connected to the purlin by self-tapping screws, it is plug-in connected.



Joint type

Panel appearance



Flat effect



Relief effect

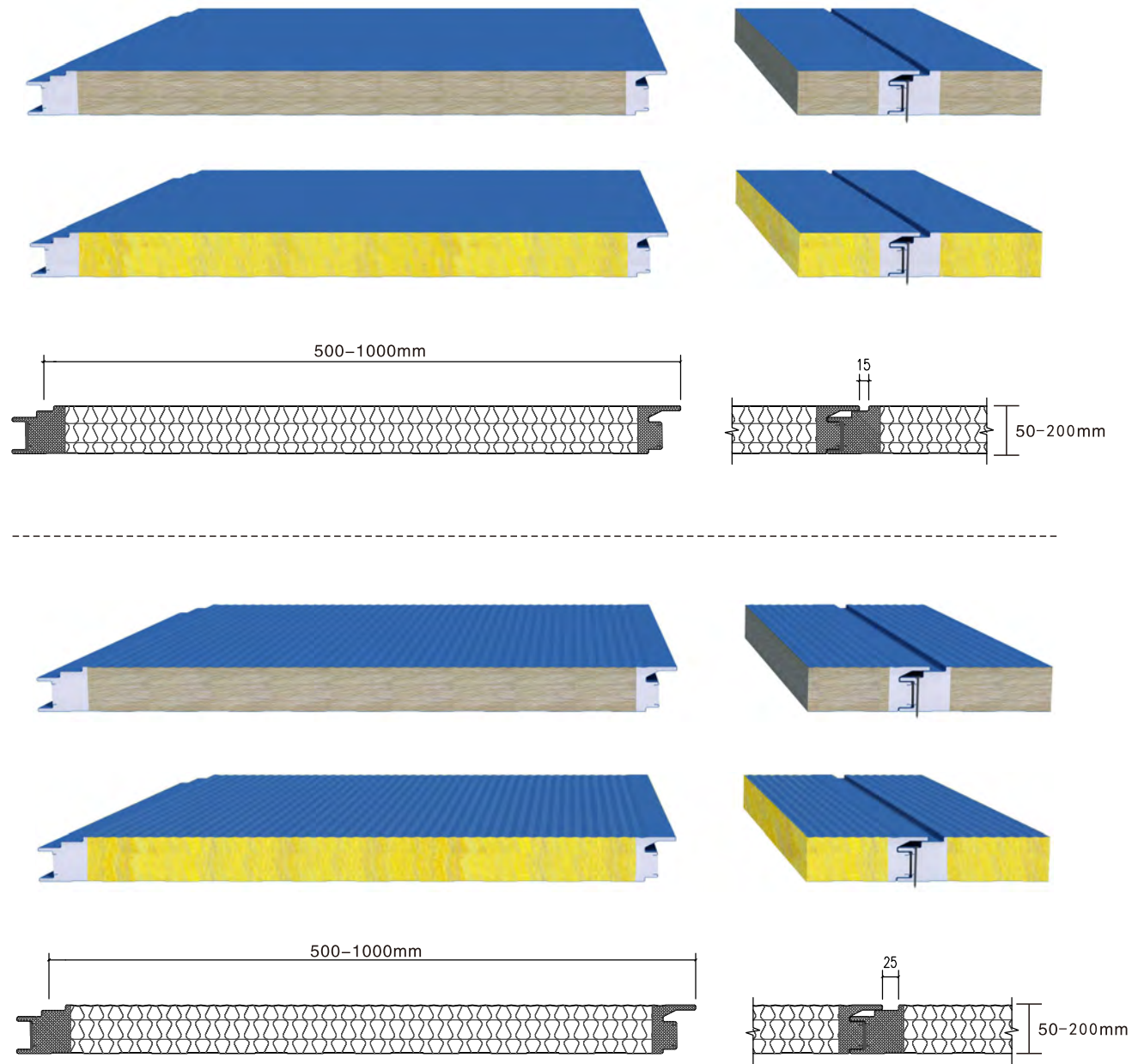


Wave effect



Ribbing effect

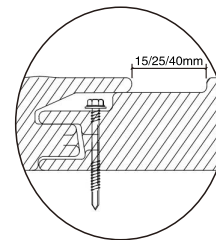
Rockwool /Glasswool Exterior Wall Sandwich Panel (with seam)



Panel appearance

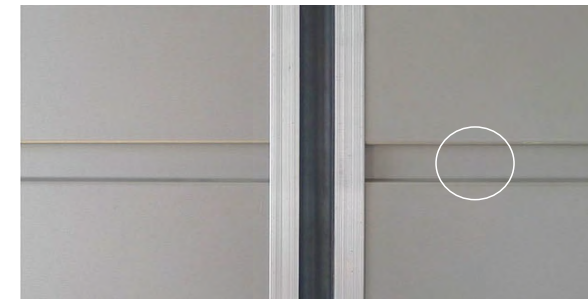


The wall panel is connected to the purlin by self-tapping screws, it is plug-in connected.

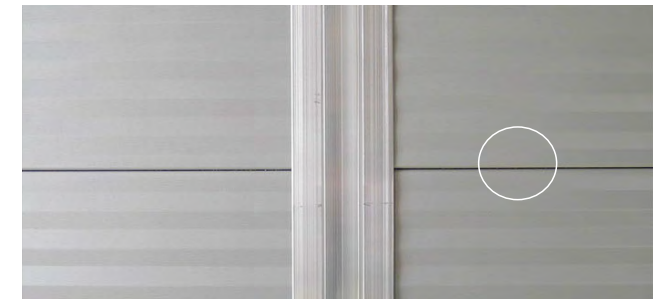


Joint type

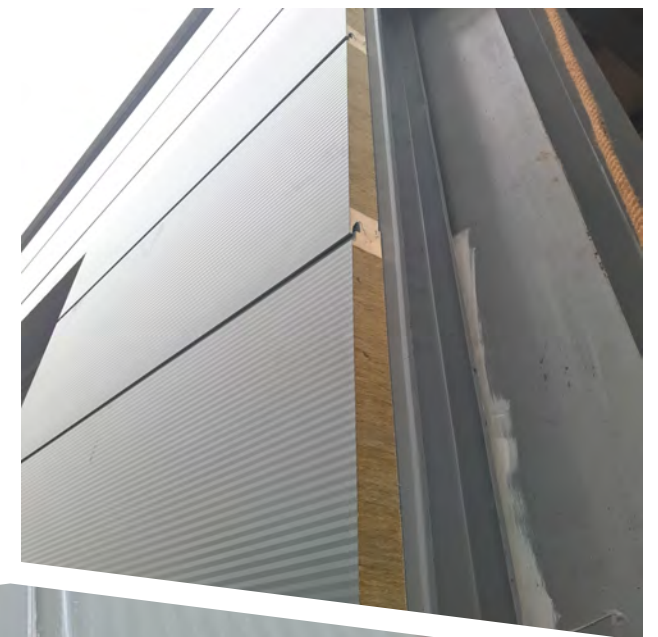
Panel joint's type



Joint with gap for horizontal application

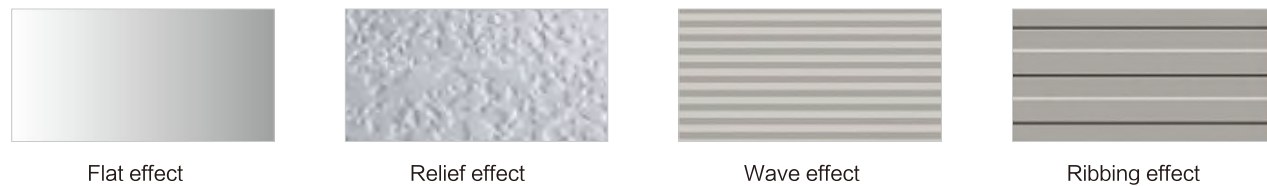


Joint without gap for horizontal application



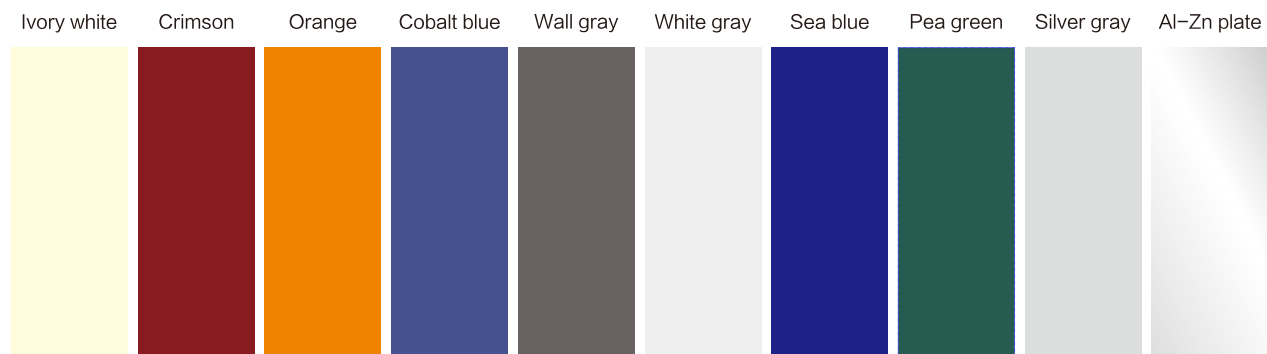
Joint type

Panel appearance



Exterior / Interior surface profile of all wall panels for choose : Flat,Relief,Small wave, Square wave.

Surface –plentiful colors



Note : In the process of printing,the colors mentioned above may have a little difference from the real colors, the actual product shall prevail.

Installation Method



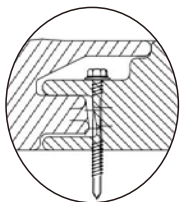
Horizontal installation



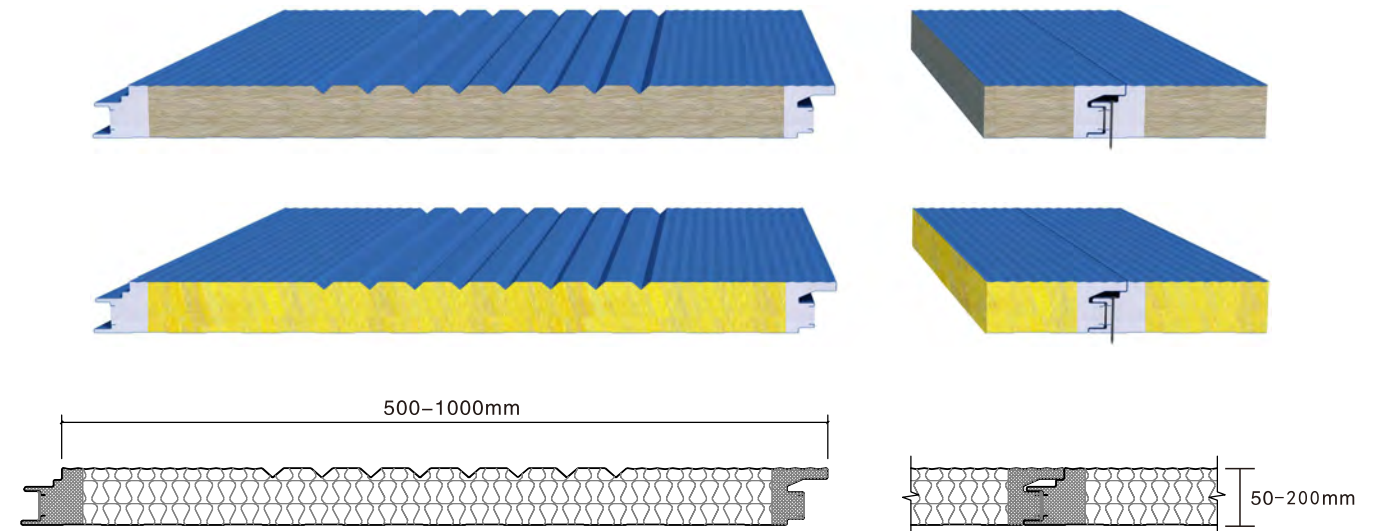
Vertical installation



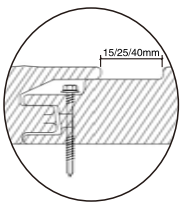
V Series Rockwool/Glasswool Exterior Wall Panel (seamless)



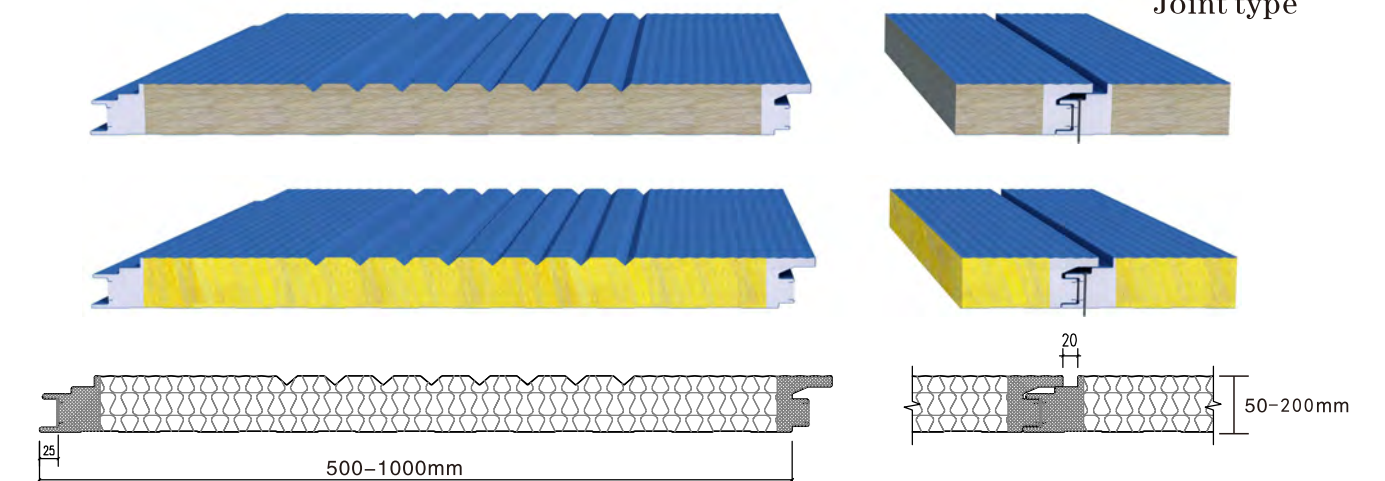
Joint type



V Series Rockwool/Glasswool Exterior Wall Panel (with seam)



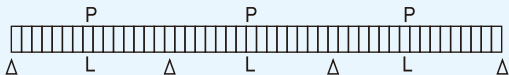
Joint type



Product Name	Rockwool Sandwich Wall Panel with PUR/PIR Double Sealing	
Model	WL500–1000/RW	WL500–1000/GW
Thickness of panels	50/75/80/100/150/200mm	
R–Value	1.32/ 1.97 / 2.11/ 2.63/3.95/5.26 M².K/w	
Thermal conductivity of Rockwool	$\lambda \leq 0.038$ w/(m. k)	
Metal sheet(0.4–0.8mm)	1) color prepainted galvanized steel sheet 2) Aluminium zinc sheet 3) stainless steel sheet 4)Aluminum Magnesium Manganese sheet	
Core material	Rockwool	
Hydrophobic rate	98%	
Glue connection	Bonding strength ≥ 0.06 MPa	
Gluing method	Automatic glue spraying	
Density : core material	Rockwool : 80kg/m³ –120kg/m³	
density: sealing side	PU:40–42kg/m³ PIR : 45–50kg/m³	
Fireproof grade	A grade	
Color of steel plate	White grey,silver gray,sea–blue,crimsonor as per Ral	
Exterior / Interior surface profile	Square wave,flat,embossment, small wave, wide ribbed	
Effective width	500–1000 mm (Regular 1000mm)	
Length of panel	Max.11.8 meters	
Installation method	1. horizontal 2. vertical	
Connection	PU edge tongue and groove with hidden screw	



Allowable vertical load and heat transfer coefficient of PNS **Rockwool sandwich wall panel** (allowable deformation $f \leq L/240$).

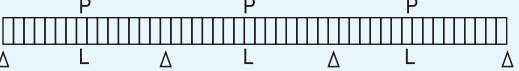
Thickness of pane	Heat Conductivity	Weight	Load capacity					
MM	W/M²K	KG/M²	P=KN/m²	0.6	0.8	1.0	1.2	1.5
50	0.75	15.53	L(m)	3.66	3.13	2.75	2.46	2.12
75	0.53	18.37	L(m)	4.9	4.22	3.73	3.35	2.91
100	0.41	21.21	L(m)	5.99	5.17	4.58	4.12	3.59
150	0.31	26.88	L(m)	7.82	6.75	5.98	5.37	4.68

Corresponding table between fire resistance limit and thickness when the **Rockwool sandwich wall panels** install horizontally (the maximum span of the panel does not exceed 4 m).

Density of core material (Rockwool)	Thickness of panel	Duration of fire resistance
kg/m³	mm	min.
≥ 120	75	90
	100	120
	150	180
	200	240



Allowable vertical load and heat transfer coefficient of PNS' **Glasswool sandwich wall panel** (allowable deformation $f \leq L/240$).

Thickness of pane	Heat Conductivity	Weight	Load capacity					
MM	W/M²K	KG/M²	P=KN/m²	0.6	0.8	1.0	1.2	1.5
50	0.69	12.95	L(m)	3.74	3.23	2.86	2.57	2.23
75	0.47	14.50	L(m)	5.01	4.34	3.86	3.48	3.05
100	0.36	16.04	L(m)	6.12	5.32	4.73	4.28	3.75
150	0.33	19.14	L(m)	8.00	6.94	6.18	5.58	4.89



Index of **core material**(rockwool)of PNS' sandwich panel

Properties	Unit	Density $\geq 100\text{kg/m}^3$	Density $\geq 120\text{kg/m}^3$	Standard
Compressive strength	kpa	85	105	EN826
Shear strength	kpa	60	80	EN12090
Tensile strength	kpa	170	220	EN1607
Slag ball content	%	<5(size of coarse slag ball >0.25mm)		ASTM C1335
		<30(Size of fine slag ball >63μm)		ASTM C1335
Thermal conductivity of rockwool panel (average temperature 20℃)	w/mk	0.036		GB/T 10295 ASTM C518
Thermal conductivity of rockwool core material (average temperature 20℃)	w/mk	0.043		EN12667
Fireproof rating	—	Noninflammable material/A reaction to fire		EN ISO 1182 GB/T 5464–1999
	—			EN1350–1GB/T 8624–2006
Fire-resistant limit (FRL)		According to the structure and thickness of sandwich panel,FRL is between 30mins and 240mins.		
Hydroscopicity (weight ratio)	%	<1		ASTM C1104 GB/T 5480.7
Hydrophobicity(specific to hydrophobic products)	%	98		GB 10299
Ageing and expansion rate	%	5 (thickness change rate after 24 hour under the state of 65℃)		prEN14509
Delting temperature	℃	>1000		—
Fiber diameter	μm	7		



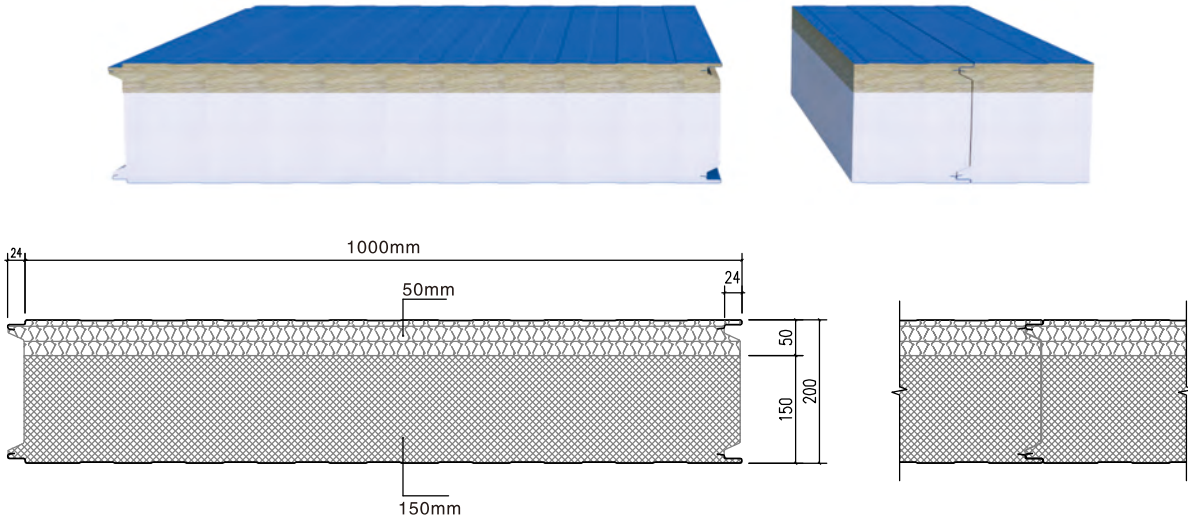
Index of **core material**(glasswool)of PNS' sandwich panel

Properties	Test standard	Test results
Fiber diameter(μm)	GB/T5480.4	5.0–7.0
Slag ball content (%)	GB/T5480.4	0
Combustibility rating	GB5464	Grade A (incombustible material)
Moisture content(%)	GB/T13350	0.4
Thermal conductivity(w/m.K)(The average test temperature as 25℃)	GB/T10295	0.031–0.036
Noise reduction coefficient(NRC)	JC/T469	0.7
Sound reduction index (Rw)	GBJ75–84	≤ 34



PNS Brand

1+1 Rockwool & PIR(PUR)Sandwich Panel



Product Introduction:

Combining the non-combustibility, high temperature resistance of rock wool and the thermal insulation of polyurethane, it effectively isolates the heat and smoke of the fire from spreading and transferring, and hinders the spread of fire.

Product Name	1+1Rockwool & PUR sandwich panel	1+1 Rockwool & PIR sandwich panel
Model	1+1 RW/PUR1000	1+1 RW/PIR1000
Core material	Rockwool &PUR	Rockwool &PIR
Density	80–120kg/m³;40–42kg/m³	80–120kg/m³;45–50kg/m³
Thickness of panel	100/120/150/180/200mm (Regular PU/PIR 100/150mm+50mm rockwool)	
Both sides	Hot galvanized steel,Aluminum zinc plate,stainless steel,aluminium steel	
Thickness of steel plate	0.4–0.8mm	
Effective width	1000–1120 mm	
Length of panel	Max.11.8m	
Fireproof grade	Rockwool : A	PIR: B1 PUR: B2