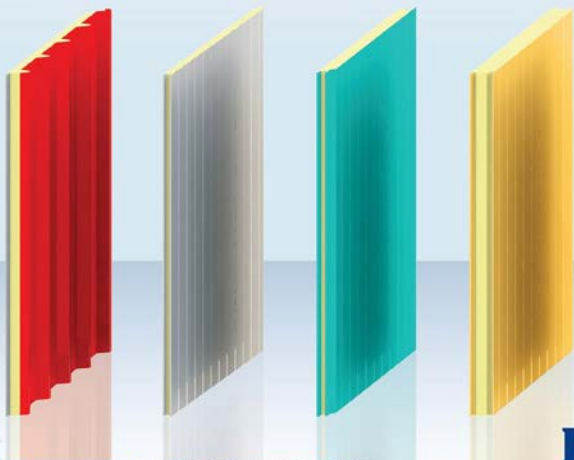




ROOF & WALL

PANEL GREEN SOLUTIONS



PIR



INTRODUCTION OF CS PANEL

CS Panel company provides wide range of steel, aluminum and stainless steel faced sandwich panels with polyurethane core marked with CS trade name. The range of products includes wall and roof sandwich panels for industrial hall, sports halls, housing, warehouses, production facilities and public utility buildings. The thickness of panels ranges from 30 mm to 200 mm. CS Panel Provides two types of polyurethane core: PUR and PIR foams.



TECHNOLOGY OF PRODUCTION

The production of CS panel is continuous and performed on a fully automated assembly line delivered by one of the leading suppliers in the trade, Cannan company (Italy). The production capacity is over 2 million square meters per annum of metal/metal faced panels. Pentane is used as the foaming agent which makes the production process environmentally friendly.

The technological processes of producing sandwich panels with polyurethane core consists of high pressure injection of mixed components forming rigid polyurethane foam between two continuously moving metal sheet panels of the upper and lower steel cladding, a special cut to length system and an automatic stacking and packaging unit.

High quality and fixed repeatability of technical parameters has been achieved due to the application of top class materials and continuous control of production.



TYPICAL PHYSICAL PROPERTIES

Physical Properties	Test Method	Results
Overall Density (kg/m ³)	ISO 845	≥40
Thermal Conductivity - 23°C (mW/m.K)	ASTM C518	≤22
Compressive Stress - 10% (MPa)	ISO 844	≥0.08
Dimensional Stability (%)	ISO 2796	+3
Water Absorption (Volume change-%)	GB 8810	≤4
Closed Cell Content (%)	ASTM D2856	≥90
Flexural Strength (MPa)	ASTM D790	≥0.08
Tensile Strength (MPa)	ASTM D1623	≥0.08
Water Vapor Transmission (Perm-in)	-	1.8-3.8
Stable Operating Temperature (°C)	-	-40 to +80



FUNCTIONS

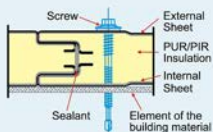
- Roofs
- External Walls
- Partition Walls
- Internal Ceilings
- Building Objects Insulation

APPLICATIONS

- Sport Facilities
- Industrial buildings
- Food Industry Buildings
- Cold Stores and Freezer Rooms
- Store Houses and Logistics Centres
- Commercial buildings and Offices



CS WALL PANEL OF TECHNICAL SPECIFICATION

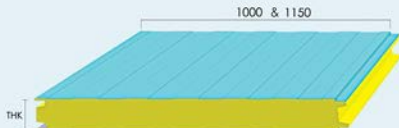
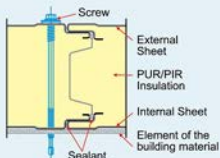


Wall Panel "Standard Joint"

THK (mm): 40/50/75/100

Standard Joint

Type of Panel	Panel Thickness (mm)	Standard Thickness of Facing* (mm)		Panel Weight (kg/m)		U Value (W/m ² K)
		External	Internal	1000 mm	1150 mm	
CS-W-PU-40-SJ	40	0.48	0.48	9.82	11.13	0.550
CS-W-PU-50-SJ	50	0.48	0.48	10.22	11.61	0.440
CS-W-PU-75-SJ	75	0.48	0.48	11.22	12.57	0.293
CS-W-PU-100-SJ	100	0.48	0.48	12.22	13.89	0.220



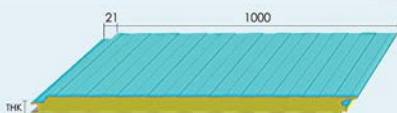
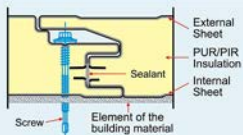
Wall Panel "Fire Rated Joint"

THK (mm): 100/125/150

Fire Rated Joint

Type of Panel	Panel Thickness (mm)	Standard Thickness of Facing* (mm)		Panel Weight (kg/m)		U Value (W/m ² K)
		External	Internal	1000 mm	1150 mm	
CS-F-PU-100-FR	100	0.48	0.48	12.18	13.97	0.220
CS-F-PU-125-FR	125	0.48	0.48	13.14	15.13	0.176
CS-F-PU-150-FR	150	0.48	0.48	14.18	16.29	0.147
CS-F-PU-175-FR	175	0.48	0.48	15.18	17.41	0.126
CS-F-PU-200-FR	200	0.48	0.48	16.18	18.57	0.110
CS-F-PU-250-FR	250	0.48	0.48	18.18	20.89	0.088



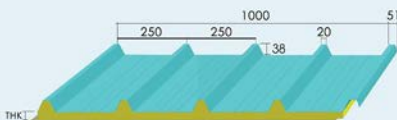
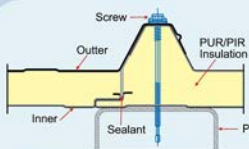


Wall Panel "Hidden Fix"

THK(mm): 50/75/100

Hidden Fix

Type of Panel	Panel Thickness (mm)	Standard Thickness of Facing* (mm)		Panel Weight (kg/m)		U Value (W/m ² K)
		External	Internal	1000 mm	1150 mm	
CS-W-PU-50-HF	50	0.48	0.48	10.64	-	0.440
CS-W-PU-75-HF	75	0.48	0.48	11.64	-	0.293
CS-W-PU-100-HF	100	0.48	0.48	12.64	-	0.220



Roof Panel

THK(mm): 30/50/75/100/150

Roof Panel

Type of Panel	Panel Thickness (mm)	Standard Thickness of Facing* (mm)		Panel Weight (kg/m)		U Value (W/m ² K)
		External	Internal	1000 mm	1150 mm	
CS-R-PU-30	30	0.48	0.48	10.31	-	0.733
CS-R-PU-50	50	0.48	0.48	11.10	-	0.440
CS-R-PU-75	75	0.48	0.48	12.10	-	0.293
CS-R-PU-100	100	0.48	0.48	13.10	-	0.220
CS-R-PU-150	150	0.48	0.48	15.10	-	0.147

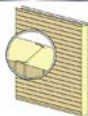
* Facing thickness is available for 0.35mm, 0.48mm, 0.50mm, 0.60mm.

* Facing material are GI and PPGI (Aluminum and Stainless Steel is subject to minimum quantities ordered)

Panel weight is calculated based on facing 0.48mm thk and PIR / PUR density is minimum 40 kg/m³.

* Max. PU panel length will subject to the transport limitation but not over 14m

JOINT TYPE



Standard Joint (SJ)



Hidden Fix Joint (HF)



Fire Rated Joint (FR)



Roof Joint



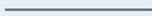
AVAILABLE FACING PROFILES



Micro (M)



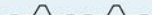
Flat (F)



Mesa (L)



Rib (R)



FACING PROFILES COMBINATION

Panel Type	External Facing				Internal Facing	
	L	F	M	R	L	F
CS-W	✓	✓	✓	✗	✓	✓
CS-R	✗	✗	✗	✓	✓	✓

MARKING OF CS PANELS

CS - PIR - W - 100 - HF . 1000 [Ext - L - 0.48 / Int - F - 0.48]



CS PANEL MARKING SCHEME

Name	Core Type	Panel Type	Joint Type
CS	<ul style="list-style-type: none"> • Polyurethane (PUR) • Polyisocyanurate (PIR) 	<ul style="list-style-type: none"> • Wall (W) • Freezing (F) 	<ul style="list-style-type: none"> • Standard Joint (SJ) • Hidden Fix Joint (HF) • Fire Rated Joint (FR)
		<ul style="list-style-type: none"> • Roof (R) 	

THE MERITS & ADVANTAGES





INSULATED DOOR

SWING DOOR



SWEEP DOOR



OFFICE DOOR



SLIDING DOOR



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(1020593-D)

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