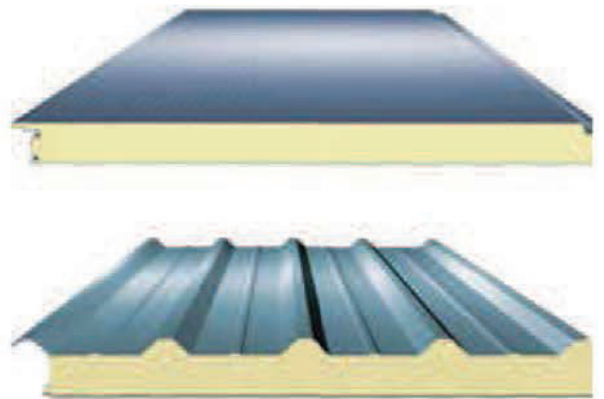


BCOMS Sandwich Panel

“Polyisocyanurate (PIR) insulated panel system for roofs & walls”



**SAUDI
MADE**



Vision and Mission

Our Vision

To be the key player in supplying the most advanced and innovative high quality services and products for building envelopes including all related accessories and components for the building industry in the Middle East and North Africa.

Our Mission

To provide innovative and robust solutions and engineering services in addition to top quality products complying with international standards to serve customers in our region of operation in an environment of professionalism and high business ethics with continuous training for our employees to promote technical and professional performance and focus on customer needs which shall lead to motivated and focused employees and a satisfactory return on investment to our shareholders.

BCOMS

Building Component Solutions LLC (BCOMS) – this sector of Zamil Industrial was formed in 2008. BCOMS manufactures and supplies construction products and building envelope material.



BCOMS is the largest supplier of Sandwich panels in Saudi Arabia. The company's sandwich panels are exported to all Middle East & North Africa (MENA), GCC and Asian countries.

BCOMS factory is located in Dammam Second Industrial City. The company produces more than 1,500,000 square meters annually of sprayed Polyisocyanurate (PIR) foam and mineral wool sandwich panels in compliance with the international standards and norms. The continuous production process on double conveyor-belt adopted by BCOMS is considered as the most innovative process for manufacturing sandwich panels.

BCOMS is committed and faithfully adhering to the ISO 9001 standards and other requirements, working continuously to improve product quality.

In addition to sandwich panels, BCOMS also produces single skin roof and wall panels, related trims and accessories. The company also supplies building accessories, such as personnel doors, roll up doors, sliding doors, aluminum windows and louvers, ridge ventilators and roof curbs.

The company also offers engineering services and turnkey solutions for the supply and installation of the roof covering and wall cladding, including the secondary members and all related accessories for new buildings as well as retrofitted buildings.

During the production of sandwich panel, **no ozone depleting gases are used**. BCOMS uses **n-Pentane** as the blowing agent during production of its panels. Pentane is a **Zero ODP** gas with no adverse effect on the ozone layer. The hydrochlorofluorocarbon (HCFC) gases used in some older, obsolete production types have a negative effect on the ozone layer, efficiently destroying the ozone molecules in the atmosphere.

BCOMS has become the first panel supplier in the Kingdom of Saudi Arabia to use the environmentally friendly n-Pentane blowing agent and hence producing green panels as part of our ecological approach in products and operations.

BCOMS Sandwich Panel

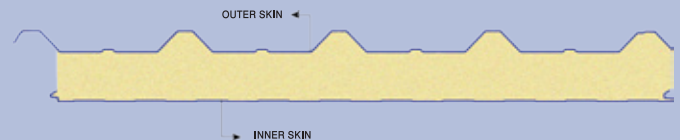
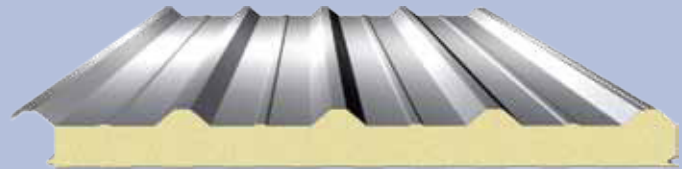
“Polyisocyanurate (PIR) insulated panel system for roofs & walls”

BCOMS Sandwich panel is a composite panel consisting of two skins and a Polyisocyanurate (PIR) core. The exposed outer skin is roll formed from steel or aluminium coils, where the inner skin is made up of the same material in addition to a Fiber Reinforced Liner (FRL) option.

The outer and inner skins, in case of steel and aluminium coils, are available in different profiles, thickness, coatings and colours to suit the different requirements and exposure conditions in addition to the aesthetic look of the building. The core consists of sprayed Polyisocyanurate (PIR) foam, BCOMS can supply panels Class 1 according to ASTM E84, FM 4880, FM 4881 & FM 4471 with N-Pentane blowing agent.

The thermal properties of the panels shown in this brochure are based on the average foam thickness, i.e.: excluding the ribs of the corrugation and the contribution of the outer and inner skin. More detailed calculation of the thermal properties can be provided upon request based on the outer and inner skin material and thickness and including the calculation of the thermal properties of the corrugation ribs.

The continuous production on double conveyor-belt process adopted by BCOMS is considered as the most innovative process for manufacturing sandwich panels nowadays. The continuous production process ensures the best mechanical properties of the insulant due to the strong adhesion of the foaming reaction mixture to both layers of the panel under the influence of heat and free-rise foaming pressure in addition to a considerably higher bending resistance.



Features

- ✓ Excellent thermal insulating properties
- ✓ Cost-efficient processing
- ✓ Chemical and biological resistance
- ✓ Light weight and durable
- ✓ Fast and easy to install
- ✓ Nice aesthetic features
- ✓ High strength and rigidity
- ✓ Non-water absorbent
- ✓ Dimensional stability
- ✓ Environmentally friendly

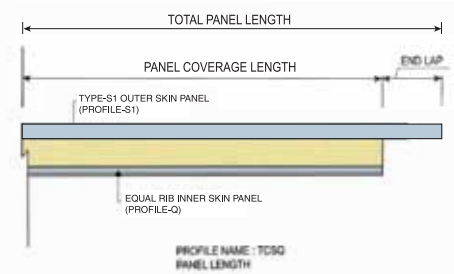
Application

- Factories
- Commercial Showrooms and Offices
- Warehouses, Convention Halls and Distribution Centers
- Aircraft Hangers and enclosed Sports facilities
- Restaurants and Schools
- Airport terminals
- Museums and theaters
- Shopping Malls and Supermarkets / Hypermarkets
- Interior wall partitioning



Available Lengths

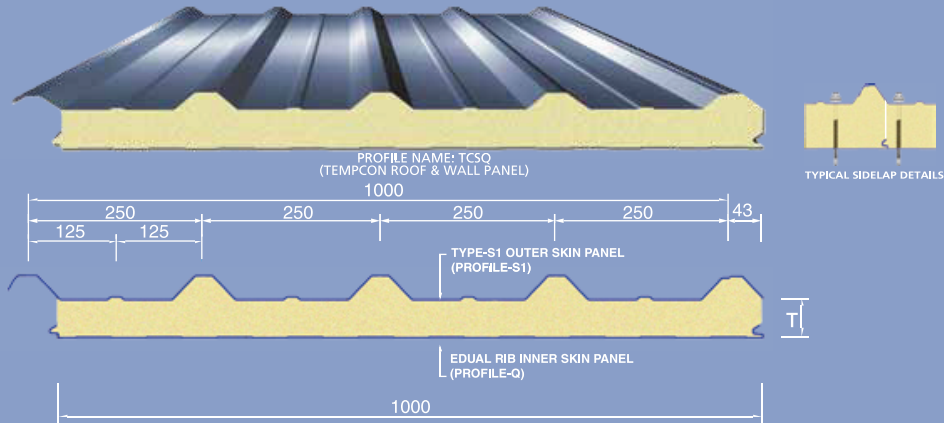
Standard lengths range from 3 to 12 meters. Minimum lengths can start from 1.5 m if panels are cut flush without overlap. It is recommended to limit the panel length to maximum 10.0 meters for safe handling on site.



TEMPCON PANELS

TEMPCON PANEL

Tempcon sandwich panels are produced using rigid Polyisocyanurate (PIR) foam core with external and internal sheets in steel or aluminum of varying thickness, coatings and colors. Tempcon is a durable sandwich panel, particularly in industrial buildings and are suitable for roof and wall for all building applications.



Dimensions & Thicknesses

Tempcon sandwich panel is available in a single outer profile type in both steel and aluminium in combination of the below listed inner skin types; the insulating core can be produced in various thicknesses and thermal insulation values.

Thermal Properties

Panel ID	Skin Type		Name Code	Core "T"	Thermal Transmission U-Value
TC	Outer	Inner		(mm)	W/m ² K
			Type-S	Equal Rib (Q)	TCSQ-30
	TCSQ-40	40			0.489
	TCSQ-50	50			0.400
	TCSQ-75	75			0.275
	TCSQ-100	100			0.210
	TCSQ-150	150			0.141
	Fiber Reinforced Linear (O)	TCSO-30		30	0.629
		TCSO-40		40	0.489
		TCSO-50		50	0.400
		TCSO-75		75	0.275
	TCSO-100	100	0.210		

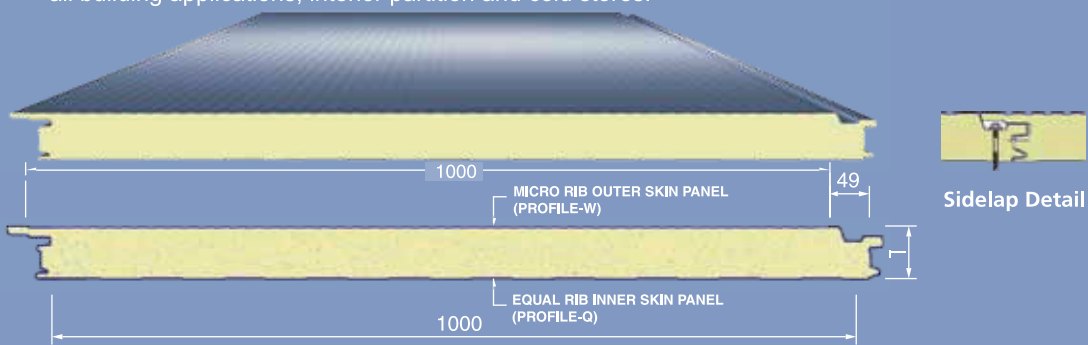
The U-Values in the above table is measured at 10°C and thermal conductivity K= 0.022 W/m °K

* For any other panel thickness, please contact our sales office.




TEMPARCH PANEL

TEMPARCH PANEL

Temparch sandwich panels are produced using rigid Polyisocyanurate (PIR) foam core with external and internal sheets in steel or aluminum of varying thickness, and are suitable for walls for all building applications, interior partition and cold stores.



Dimensions & Thicknesses

Panel	Outer Skin	Inner Skin		Sandwich Panel				
ID	Skin Name	ID	Skin Name	ID	Name – (Thickness)			
TA	Micro Rib	W						
			Equal Rib	Q	-	TAWQ-60	TAWQ-75	TAWQ-100
			Fiber Reinforced Liner	O	TAWO-40*	TAWO-60	TAWO-75	TAWO-100
	Equal Rib	U						
			Equal Rib	Q	-	TAUQ-60	TAUQ-75	TAUQ-100
			Fiber Reinforced Liner	O	TAUO-40*	TAUO-60	TAUO-75	TAUO-100
V - Groove	V							
		Equal Rib	Q	-	TAVQ-60	TAVQ-75	TAVQ-100	
		Fiber Reinforced Liner	O	TAVO-40*	TAVO-60	TAVO-75	TAVO-100	

Note: *- This thickness is available for TEMPARCH Wall Panel with Fiber Reinforced Liner (FRL) only.

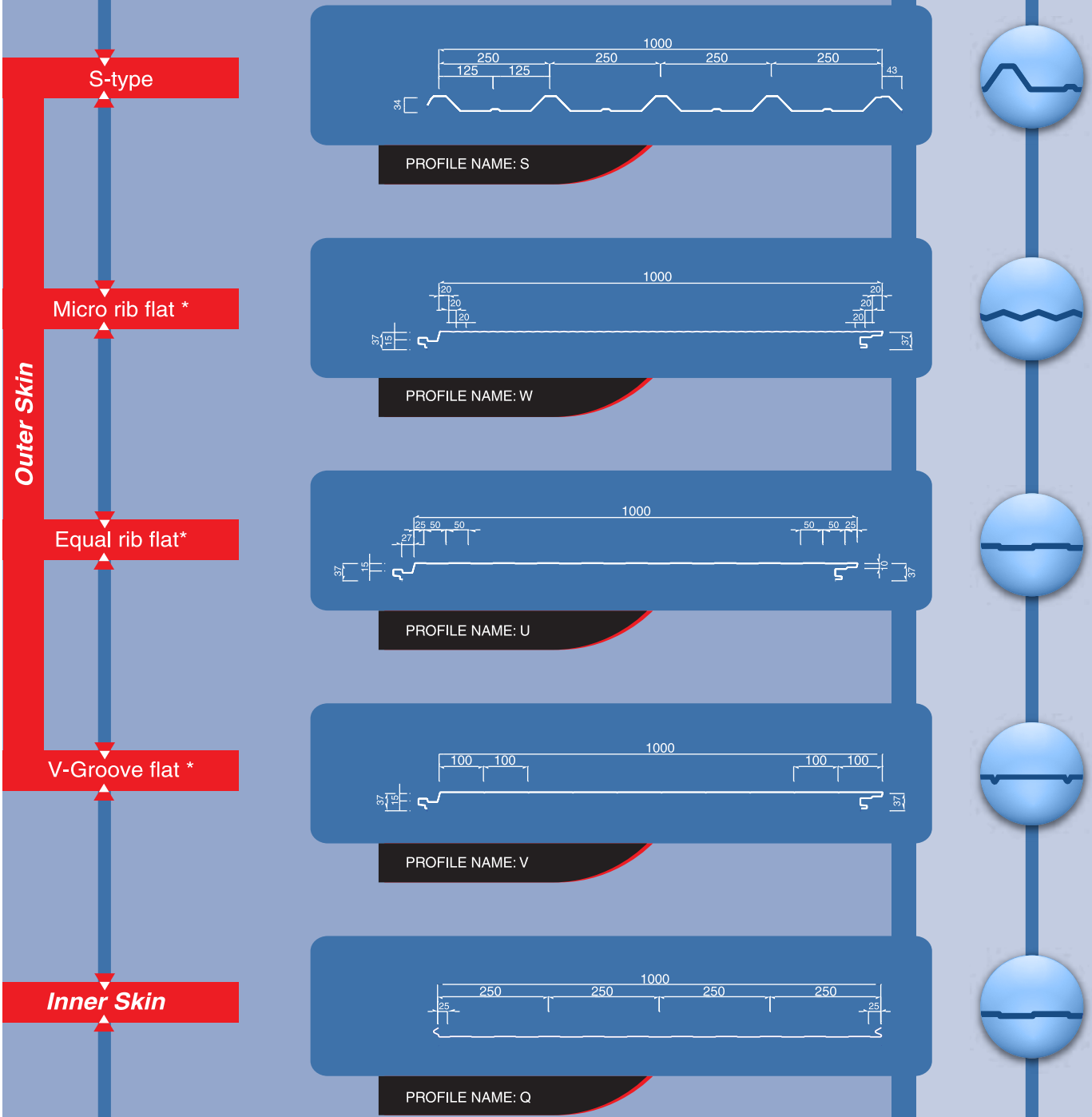
Thermal Properties

Panel Thickness	Thermal Transmission U-Value	Thermal Resistance R-Value
(mm)	W/m ² K	m ² K/W
40	0.550	1.818
60	0.367	2.724
75	0.293	3.409
100	0.22	4.545
150	0.147	6.82

The U-Values in the above table is measured at 10°C and thermal conductivity K= 0.022 W/m °K

Skin Profiles

The skin types mentioned in all sandwich panel types are shown below to illustrate dimensions in detail.



* : These Corrugations can be used for interior skin after consulting our representative.



Panel Finish

- **Base Metal:**

- Aluminium Zinc Alloy coated steel confirming to ASTM A 792M Grade 340B. These panels are coated with corrosion resistant Zinc-Aluminium alloy metallic coating AZM150 or AZM100 through a continuous hot-dip process.
- Galvanized coated steel confirming to ASTM A653M Grade B (LFQ) or SS Grade 230 or SS Grade 340, metallic coating Z275 (G90) or Z180 (G60) through a continuous hot-dip process.
- Aluminium confirming to ASTM B 209M Alloy 3003 / 3105.

- **Paint Finish**

- Painted Exterior surface coating of 25 microns of:
 - Epoxy primer with polyester polymer
 - Epoxy primer with polyvinylidene fluoride well known as PVF2 liquid coating.
- Painted interior surface coating of 5 – 7 microns of primer suitable for foam application.

For other substrate or paint specification, please contact BCOMS sales

BCOMS Panel Color Specification



Please refer to BCOMS panel chart, as actual colors may vary from these printed samples.

Material Availability			Pre-Painted Steel panels with Zincalume/ Galvanized Substrate and 25 microns modified polyester paint finish (XRW) on the outer face											
			Aluminum Panel	Aluminum Frost White	Frost White	Arabian Beige	Cactus Green	Royal Blue	Flame Red	Shasta Blue	Silver Metallic	Grey Blue Metallic	Leaf Green	Daisy Yellow
Panel Type	Thickness	Alum(FW)	FW	AB	CG	RB	FR	SB	SM	GBM	LG	DY		
Tempcon Sandwich Panel (TCSQ)	Outer Skin	0.5mm	◊	●	●	●	●	◊	◊	◊	◊	◊	◊	●
	Outer Skin	0.7mm	●	●	◊	◊	◊	◊	◊	◊	◊	◊	◊	◊
Temparch Sandwich Panel (TAUQ)	Outer Skin	0.5mm	◊	●	●	●	●	◊	◊	◊	◊	◊	◊	●
		0.7mm	●	●	◊	◊	◊	◊	◊	◊	◊	◊	◊	◊
	Inner Skin	0.5mm	●	●	◊	◊	◊	◊	◊	◊	◊	◊	◊	◊

Notes:

1. Steel Panel with "XPD" (high performance Polyvinylidene Fluoride well known as PVDF) finish is available in BCOMS stock in "Frost White" color.
2. Aluminum Panel with "XRW" finish is available in BCOMS stock in "Frost White" color.
3. Aluminum Panel with "XPD" finish is available upon request.
4. Other standard and non-standard "RAL" color, thickness, substrate and paint finish can be supplied upon request.

Please consult BCOMS sales for lead time, price details and for all other non-stock material.



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