

# PRE-ENGINEERED STEEL BUILDINGS



**Global Leader**  
PREFABRICATED BUILDINGS



## COMPANY PROFILE



**20 Years**  
Manufacturing  
Excellence

**5000+**  
Projects  
Executed

**1500+**  
Reputed  
Clients

**10 million+**  
Sq.ft. Area Covered  
With Prefab Structures

EPACK is one of the leading providers of turnkey solution for innovative and efficient building materials. The principal activity of the organization comprises of manufacturing and supply of:

- Pre Engineered Buildings
- Prefabricated Structures
- Insulated Sandwich Panels (PUF / EPS / Rockwool / Glasswool) &
- LGSF structure .

Since the inception of EPACK in 1999 at a prime location in Greater Noida, EPACK has been the leading manufacturer of PEB in India Producing more than 10,000 Tons per annum and covered over more than 10 million sq.ft. area in Prefab Structures around the world.





## PRE ENGINEERED BUILDINGS

- Warehouses
- Factory Shed
- Airport Terminals
- Stadiums



## PREFABRICATED STRUCTURES

- Living Accommodation
- Site Office
- School/Hospitals
- Clean/Cold Rooms



## INSULATED SANDWICH PANELS

- PUF
- EPS
- Rockwool &
- Glasswool Panels



## LGSF BUILDINGS

- Marketing Office
- Sample Flats
- Villa / Cottages
- Mass Accommodation





### Our Infrastructure

We owe our success to our Strong infrastructural base. All manufacturing activities are carried under one roof, right from Cutting, Shearing, Bending, Foaming and Finishing to actual shipment. Our work force consist of numerous skilled engineers, technicians who give us an edge over others. In addition our factory is well equipped with all latest technologies and sophisticated machinery & equipments.



### MANUFACTURING FACILITIES

- ❖ CONTINUOUS H BEAM WELDING MACHINE
- ❖ CNC PLASMA CUTTING MACHINE
- ❖ CONTINUOUS SANDWICH PANEL MACHINE
- ❖ SHEARING MACHINE
- ❖ C/Z PURLIN MACHINE
- ❖ CNC PUNCHING MACHINE
- ❖ LGSF MACHINE
- ❖ ROOF PROFILE MACHINE
- ❖ SHOT BLASTING AND PAINTING FACILITY



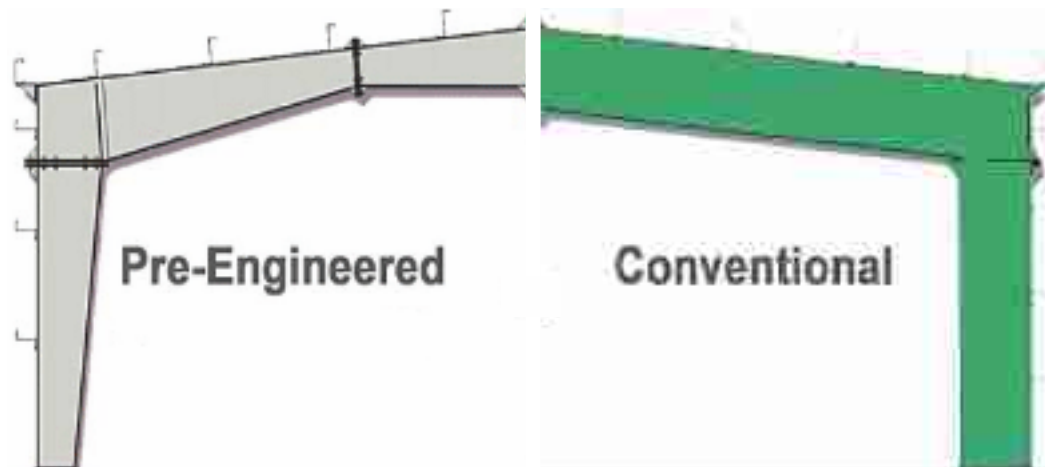


### Key Advantages:

- ❖ Over **10** million square feet area covered in Pre-fab structures around the world.
- ❖ We are regional leader in the design, fabrication, supply and erection of Pre Engineered Building and known for timely delivery of project.
- ❖ Fully equipped with automated machineries which helps us full fill our client requirements on time.
- ❖ Innovative design and engineering capabilities of the highest degree.
- ❖ Versatile product range.
- ❖ Superior Quality materials and state of the art machinery.

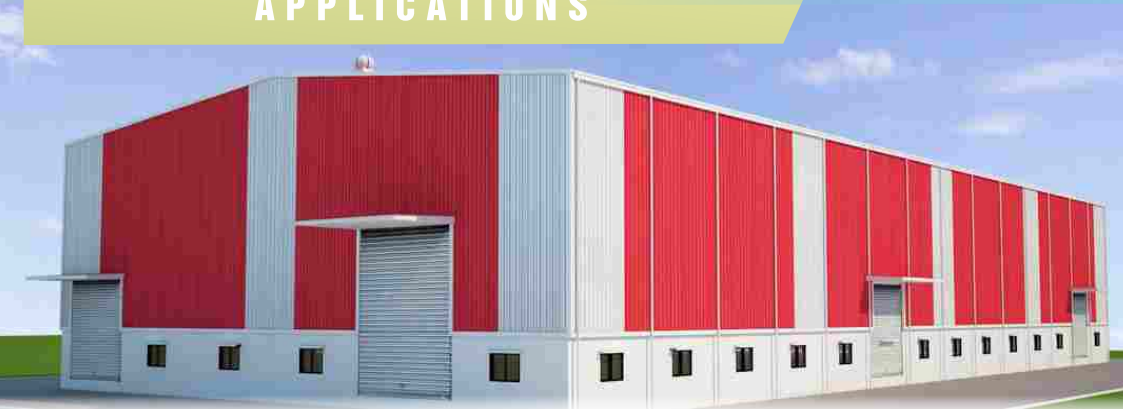






Features	EPACK Pre- Engineered Buildings	Conventional Structural Steel Buildings
Design	Highly sophisticated software design package is used for designing which reduces design time significantly and eliminates errors.	Substantial engineering and detailing work is required on every project , resulting in time overruns.
Delivery	Average 6 to 8 weeks.	Average 20 to 26 weeks.
Foundations	Simple design , light foundations	Heavy Foundations.
Erection Simplicity	Standard Components connections, short learning curves.	Connections are complicated and differ from project to project , resulting in long learning curves of erection.
Erection Time	Fast and standard components connections.	Long, highly variable and unpredictable.
Seismic	Low- weight flexible frames offer higher resistance to seismic forces.	Rigid heavy weight structures do not perform well in seismic zones.
Overall Price	Cost Efficient.	High.
Architecture	Outstanding architectural design can be achieved at low cost using standard architectural features and interface details.	Special architectural design and features must be developed for each project, which often require research and thus resulting in much higher cost.
Future Expansion	Future expansion is simple, easy and cost effective.	Future expansion would be more difficult and more likely, costlier.
Safety and Responsibility	Single source of supply results in total responsibility.	Multiple responsibilities can result in questions of who is responsible when components do not fit properly.

## APPLICATIONS



The total potential for pre-engineered buildings (PEBs) in India is around 3.5 million tones , i.e 100 million square meters per annum. But annually only 700,000 tones of PEBs is being used, which is just 20% of the potential. The demand is roughly increasing by 12 to 15% per annum. The usage depends on conversion of potential concrete buildings to steel that is nearly 70% in the US, whereas in India it is less than 20%.

In fact, in India, PEB could make a major contribution in small span parking shed to Large span Air Craft hanger .

The most common application of PEB in various sectors are :

### ❖ INDUSTRIAL

- Factories
- Ware House
- Workshop
- Car Parking Sheds
- Cold Storages



### ❖ INSTITUTIONAL

- Hospitals
- Schools
- Auditoriums
- Exhibition Halls



### ❖ COMMERCIAL

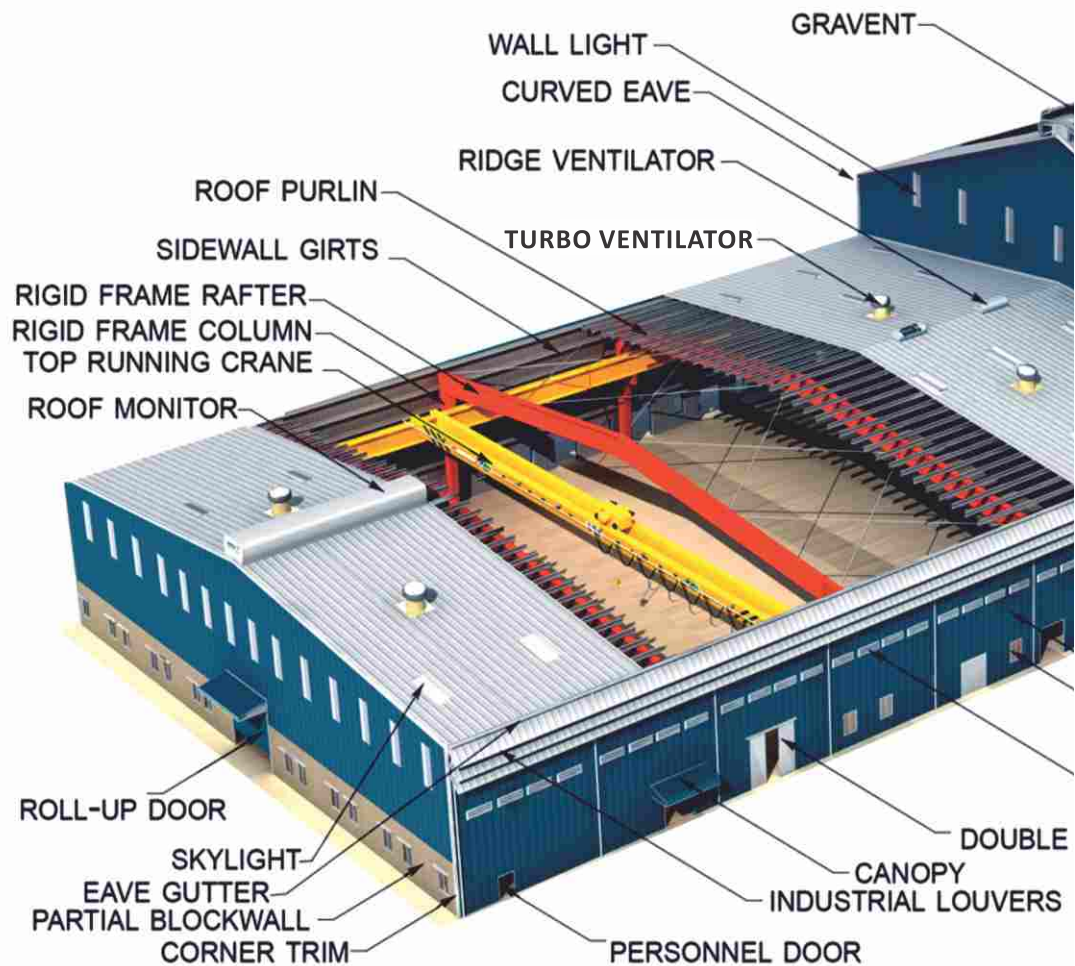
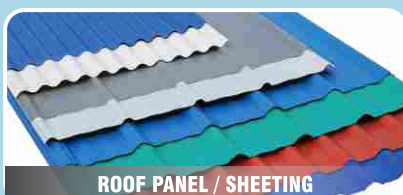
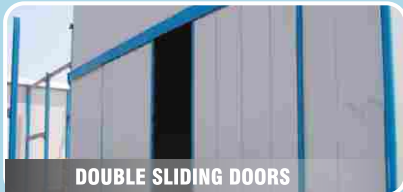
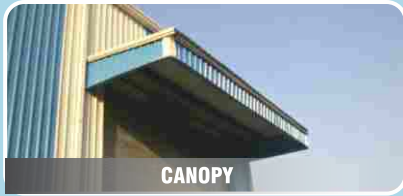
- Shopping Centers
- Super Markets
- Restaurants
- Office buildings
- Petrol Pump Stations



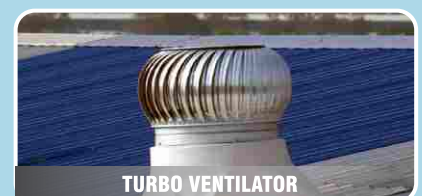
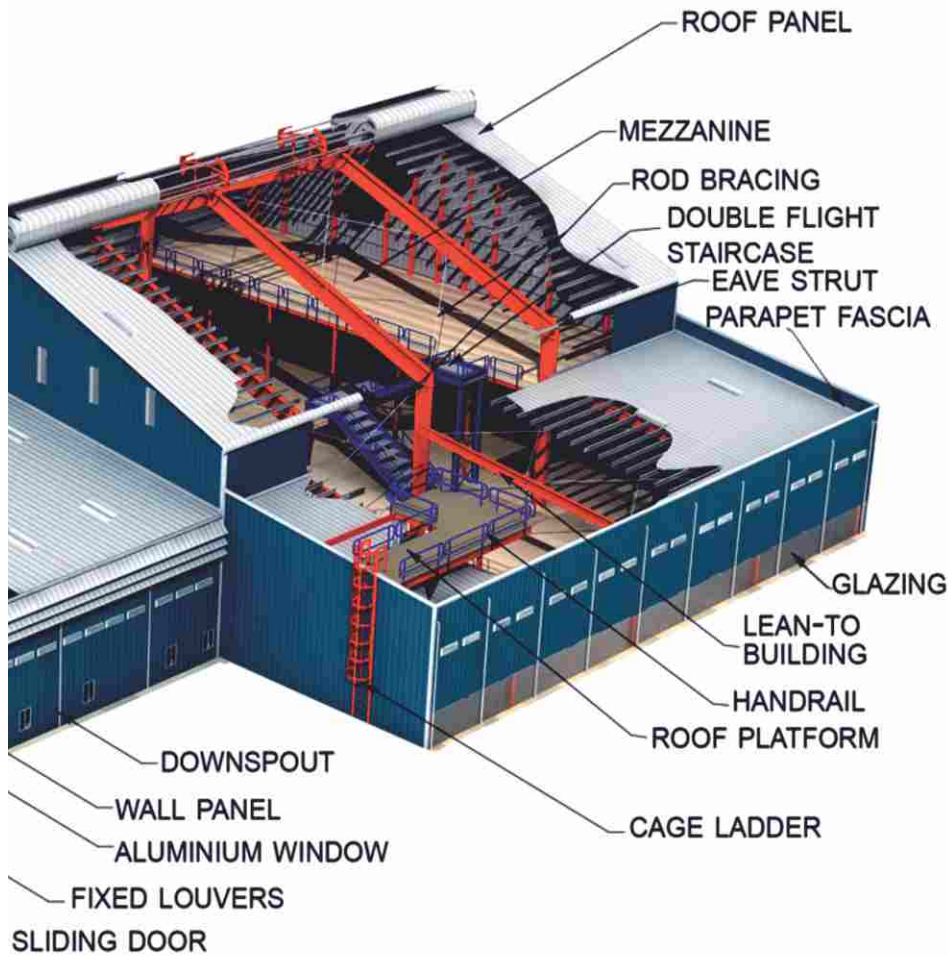
### ❖ OTHER APPLICATIONS

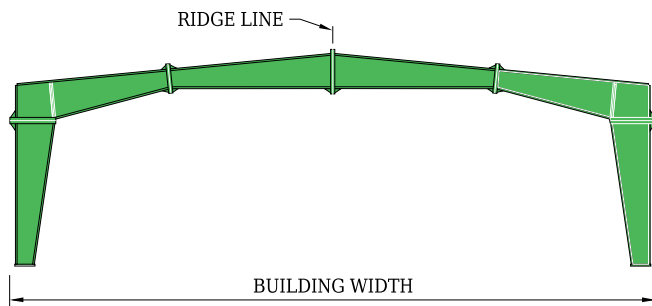
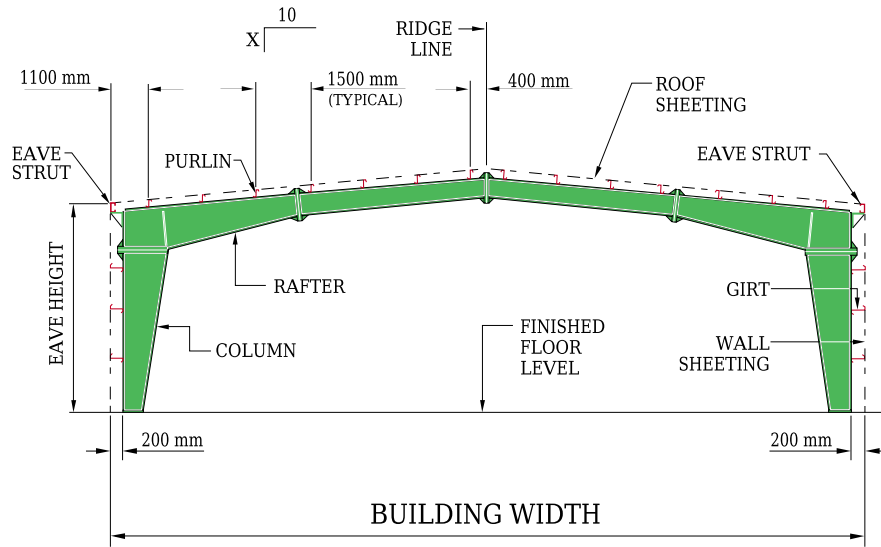
- Residential Buildings
- Aircraft Hangers
- Grain Storage
- Dairy Farms
- Poultry buildings
- Gymnassiums
- Railway stations



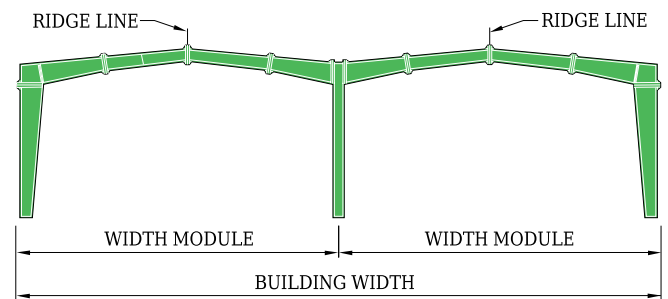




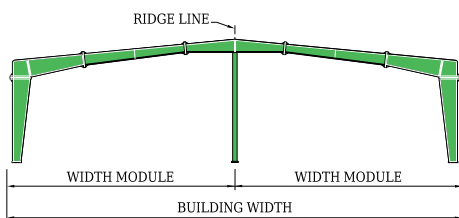




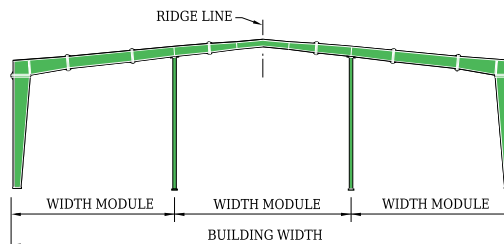
MAX. PRACTICAL WIDTH = 80 m  
**Clear Span ( CS )**



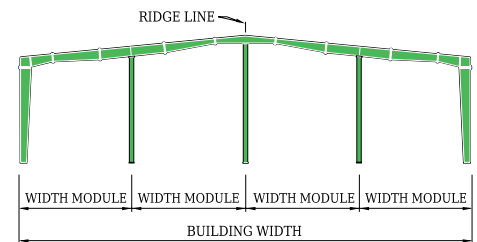
MAX. PRACTICAL WIDTH MODULE = 80 m  
**Multi-Gable ( MG )**



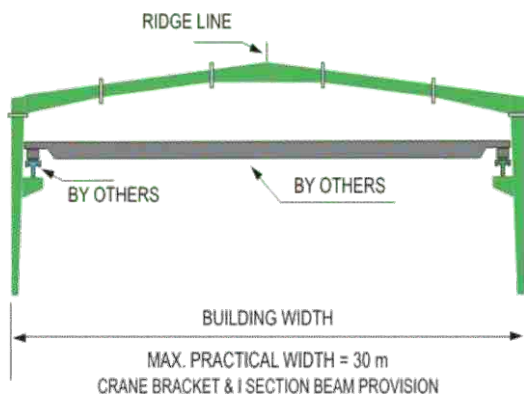
MAX. PRACTICAL WIDTH MODULE = 70 m  
**Multi-Span "1" ( MS-1 )**



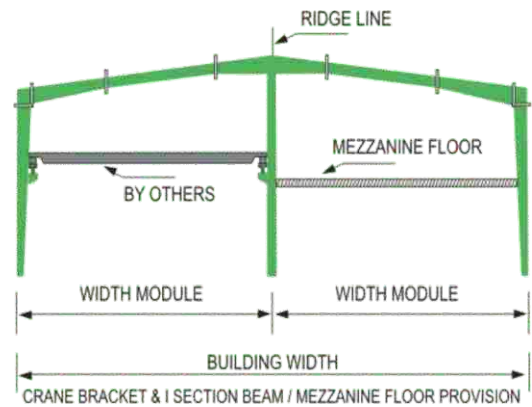
MAX. PRACTICAL WIDTH MODULE = 70 m  
**Multi-Span "2" ( MS-2 )**



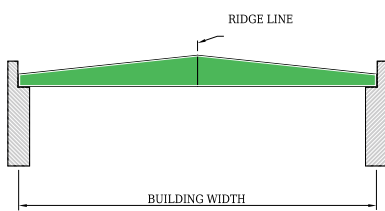
MAX. PRACTICAL WIDTH MODULE = 70 m  
**Multi-Span "3" ( MS-3 )**



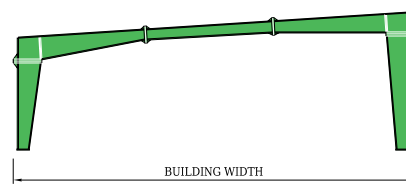
Single Span EOT Crane



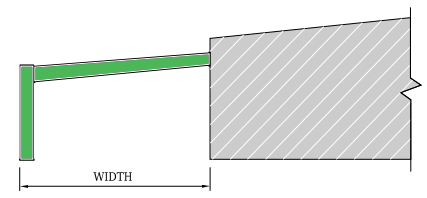
Multi-span EOT Crane with Mezzanine Floor



Roof System ( RS )



Single Slope ( SS )



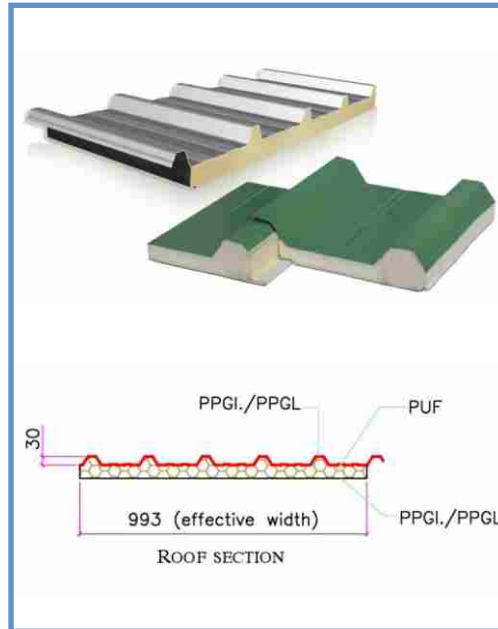
Lean-To ( LT )



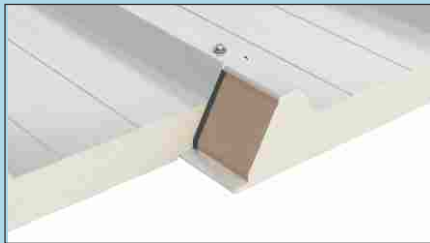
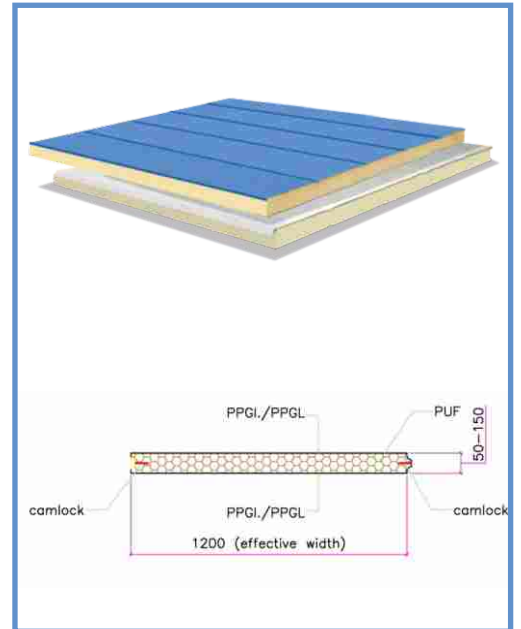
EPACK sandwich panels are high quality products produced with profiled Pre-Painted Zinc Coated Galvalume Coated Steel , Stainless Steel Sheets and combined with Polyurethane/EPS/Acoustic core material as the insulation material .

### PUF PANEL

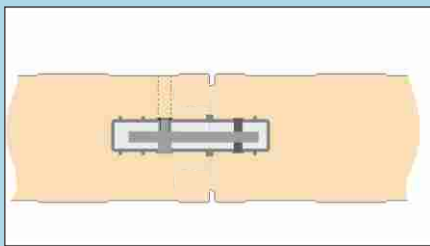
#### ROOF PANEL



#### WALL PANEL



OVERLAP JOINTING SYSTEM



CAMLOCK JOINTING SYSTEM

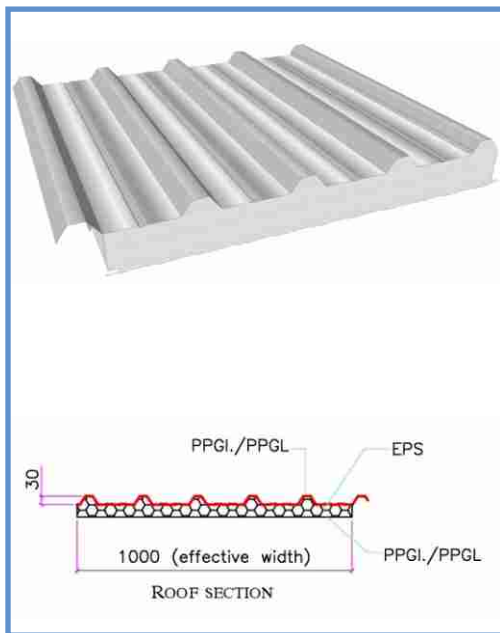
### Technical Specifications

Width-wall	1200mm (STANDARD/CUSTOMIZED)							
Width- roof	993mm							
Core thickness (mm)	30	40	50	60	80	100	120	150
U value ( m <sup>2</sup> °K/w)	0.75	0.53	0.43	0.33	0.28	0.22	0.18	0.15
R value ( Btu/hr/ft <sup>2</sup> /°F)	9.8	11	13	16	20	26	30	38
Fascia Options	PPGS/PPGL/Alu/Tarfelt/Cement Fiber Board/SS							
Density (Kg/m <sup>3</sup> )	40±2 Kg/m <sup>3</sup>							
Thermal Conductivity at 10 °C mean Temperature (w/m°k)	0.023							
Compressive Strength at 10% Deformation (Kg/cm <sup>2</sup> )	2.1							
Bending Strength (Kg/cm <sup>2</sup> )	4							
Tensile Strength (Kg/cm <sup>2</sup> )	3.7							
Adhesive Strength (Kg/cm <sup>2</sup> )- foam to steel	2.9							
Water Absorption (Volume %)	0.2% at 100%RH							
Closed Cell Content (%)	92-95%							
Vapor Permeability at 90% (RH) & 38 °C(Gms /Hr.m <sup>2</sup> )	0.12							
Fire Class	Fire Resistant							

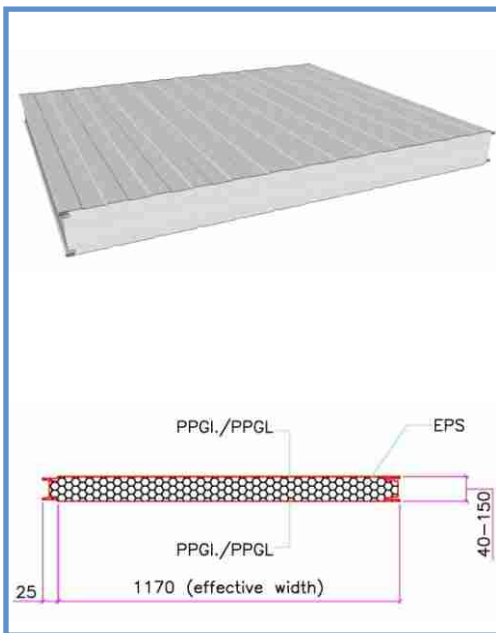
With a wide range of different colors cut-to-length in our factory and supplied ready-to-install our modern building products will take a good care in a highly economic weather-independet and fast modular building process.

## EPS PANEL

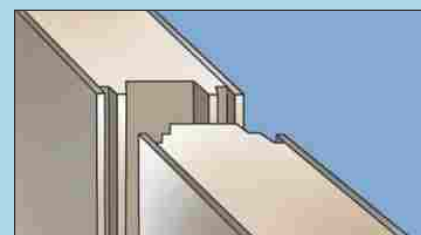
### ROOF PANEL



### WALL PANEL



OVERLAP JOINTING SYSTEM



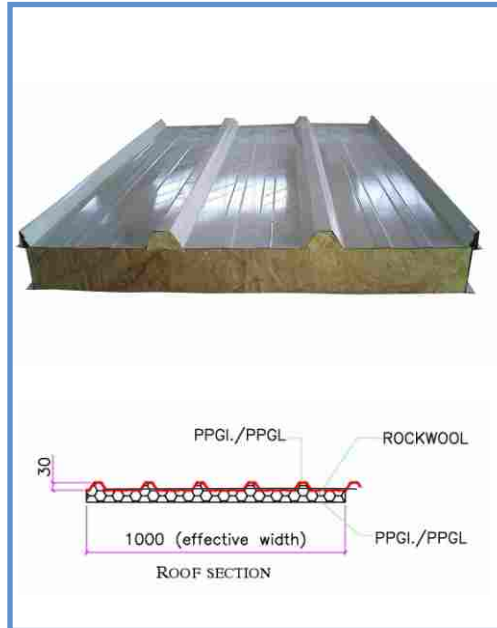
TONGUE & GROOVE JOINTING SYSTEM

## Technical Specifications

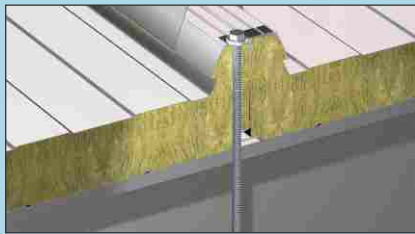
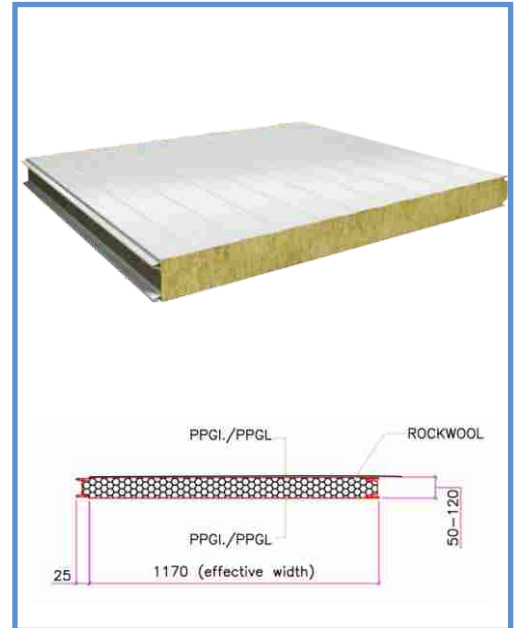
Width-wall	1170 mm						
Width- roof	1000 mm						
Core thickness (mm)	40	50	60	80	100	120	150
U value ( m <sup>2</sup> °K/w)	0.75	0.53	0.43	0.33	0.28	0.22	0.18
R value ( Btu/hr/ft <sup>2</sup> /°F)	9.8	11	13	16	20	26	30
Fascia Options	PPGS/PPGL						
Density (Kg/m <sup>3</sup> )	16 Kg/m <sup>3</sup> ( STANDARD) / 20-24 Kg/m <sup>3</sup>						
Thermal Conductivity at 10 °C mean Temperature (w/m°k)	0.032						
Compressive Strength at 10% Deformation (Kg/cm <sup>2</sup> )	1.95						
Bending Strength (Kg/cm <sup>2</sup> )	2.8						
Tensile Strength (Kg/cm <sup>2</sup> )	1.53 – 2.34						
Adhesive Strength (Kg/cm <sup>2</sup> ) foam to steel	2.4						
Water Absorption (Volume %)	3%						
Closed Cell Content (%)	90-95%						
Vapor Permeability at 90% (RH) & 38 °C (Gms /Hr.m <sup>2</sup> )	25-40						
Fire class	Self Extinguishing						

### ROCKWOOL PANEL

#### ROOF PANEL



#### WALL PANEL



OVERLAP JOINTING SYSTEM



TONGUE & GROOVE JOINTING SYSTEM

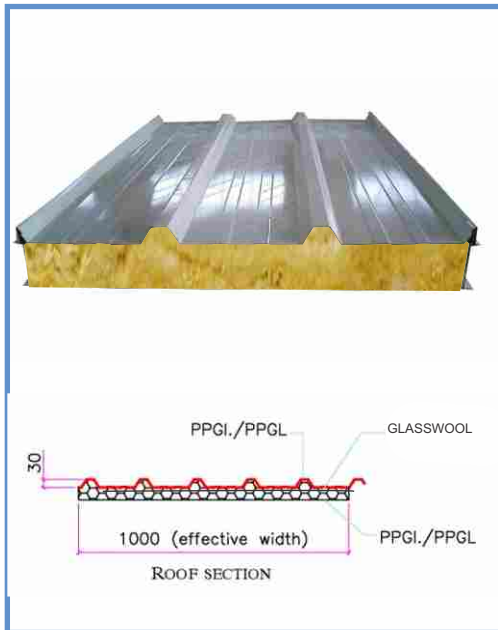
### Technical Specifications

Width-wall	1170mm				
Width- roof	1000mm				
Core thickness (mm)	50	60	80	100	120
U value ( $\text{m}^2 \text{ } ^\circ\text{K/w}$ )	0.72	0.61	0.46	0.37	0.28
R value ( $\text{Btu/hr/ft}^2 / ^\circ\text{F}$ )	8	10	13	16	20
Fascia Options	PPGS/PPGL				
Density ( $\text{Kg/m}^3$ )	100 $\text{Kg/m}^3$				
Thermal Conductivity at 10 $^\circ\text{C}$ mean Temperature ( $\text{w/m}^2\text{k}$ )	0.04				
Compressive Strength at 10% Deformation ( $\text{Kg/cm}^2$ )	0.50985				
Bending Strength ( $\text{Kg/cm}^2$ )	0.7647				
Melting Point	> 1000 $^\circ\text{C}$				
Water Absorption (Volume %)	Less than 1%				
Sound Reduction (db)	28-30				
Fire class	Non- Combustible				

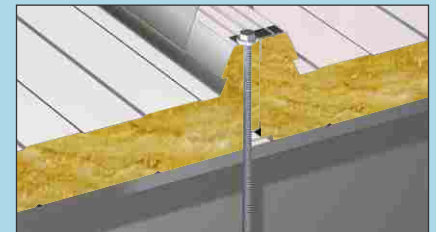
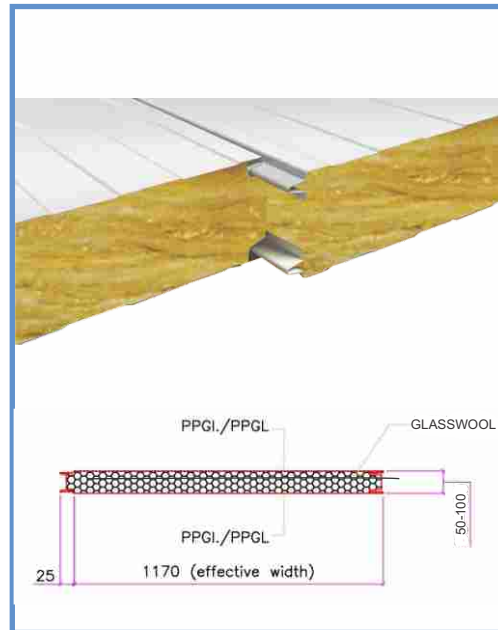


## GLASSWOOL PANEL

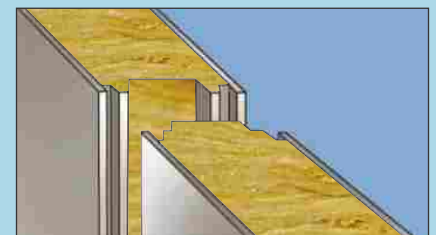
ROOF PANEL



WALL PANEL



OVERLAP JOINTING SYSTEM



TONGUE & GROOVE JOINTING SYSTEM

## Technical Specifications

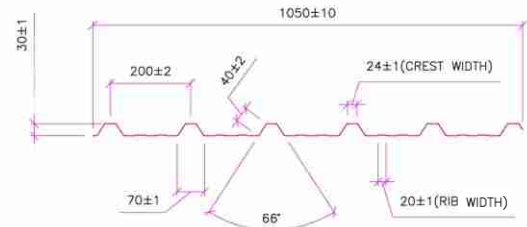
Width-wall	1170mm			
Width- roof	1000mm			
Core thickness (mm)	50	60	80	100
U value ( $m^2 \text{ } ^\circ K/w$ )	0.89	0.67	0.43	0.36
R value ( $Btu/hr/ft^2 / ^\circ F$ )	14	17	21	27
Fascia Options	PPGS/PPGL			
Density ( $Kg/m^3$ )	48 $Kg/m^3$			
Thermal Conductivity at 50 $^\circ C$ mean Temperature ( $w/m^2k$ )	0.033			
Compressive Strength at 5% Deformation ( $Kg/cm^2$ )	0.4896			
Recovery After Compression	90% min.			
Service Temperature	$-190^\circ C$ to $+250^\circ C$			
Water Absorption (Volume %)	Less than 2% in accordance with IS : 3144/BS:3978			
Sound Reduction (db)	28-30			
Fire class	Non- Combustible			

### ROOF SHEETING & WALL CLADDING

EPACK use high tensile steel as base material with a coating of high quality alloy of Al & Zn. We give the surface coating a series of pre treatments to ensure that they are completely clean. E-PACK sheets can be used for walls as well as roofs

#### PROFILE SHEET SPECIFICATION

Material Used	Zincalume/Bare Galvalume
Yield Strength	550 Mpa standard 245-500 Mpa optional
Coil Input Width	1220 mm
Sheet width	1050 ± 10 mm
Thickness Range	0.35 – 0.70 mm
Pitch Width	200 ± 2 mm
Crest height	30 ± 1 mm
Crest Width	24 ± 1
Length	As per requirement
Colour	As per requirement

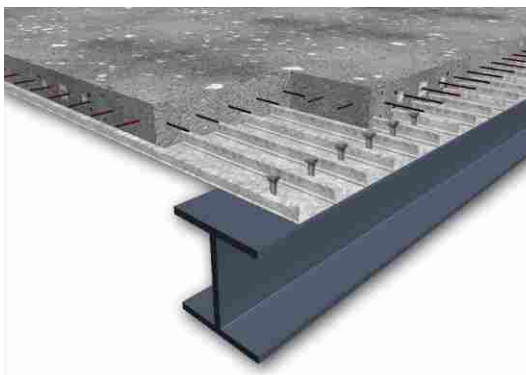


### DECKING SHEET

EPACK Deck Panel for RCC Floors are manufactured from prime quality CR coils & are available in any transportable length with finish of your choice. It is not only an economical solution for industrial, commercial and warehouse building but also offers advantages of being crackproof, heatproof and leakproof.

#### SHEET SPECIFICATION

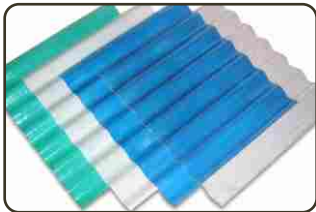
Material Used	HR/CR/Galvanized steel
Yield Strength	250 Mpa
Sheet width	950 ± 10 mm
Sheet cover width	910 ± 10 mm
Thickness Range	0.60– 2mm
Length	Upto 12m
Pitch Width	130 ± 2 mm
Crest Height	44 ± 1
Type	Bare , Primer coated, Galvanized, Pre painted



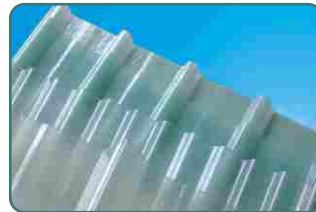
## DAY LIGHT PANEL

EPACK polycarbonate sheet and FRP sheet can be use as daylight roof or wall light panel. Poly carbonate Transparent sheets are made out of finest lexan polycarbonate sheets from GE-plastics having excellent light transmission between 50-92% depending on thickness . These sheets are available in required length and match the profile of roof and wall sheeting .

FRP ( Fiber Reinforced Plastic ) is a polymer (plastic) matrix, either thermo set or thermoplastic, that is reinforced with a fiber usually glass, carbon, basalt, or aramid or other reinforcing material such as paper or wood or asbestos with a sufficient aspect ratio (length to thickness) to provide a discernable reinforcing function in one or more directions.



**POLYCARBONATE SHEET**



**FRP SHEET**

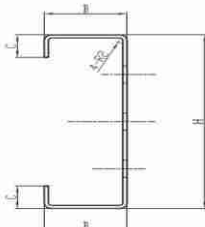


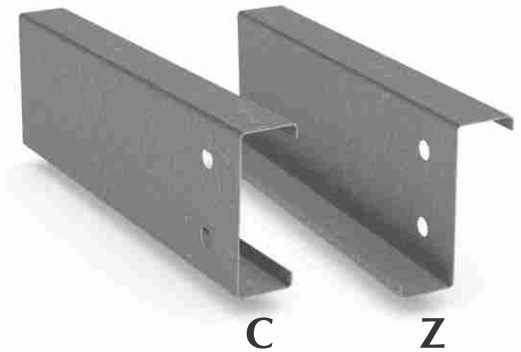
## COLD ROLL METAL PROFILES AND SECTION

### C & Z PURLIN

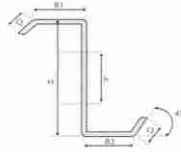
EPACK C Purlin are used at the intersection of the side wall and the roof whereas, Z Purlin are used on the roof and wall to support panels and sheets.

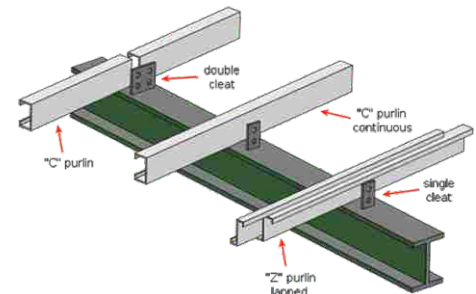
#### C-PURLIN SPECIFICATION

C Purlin Shape	Model	Section Size				
		H (mm)	h (mm)	B (mm)	C (mm)	t (mm)
	C-80	80	CENTER	40/50	15	1.5-2.5
	C-100	100	50	54	15	1.5-2.5
	C-120	120	50	54	15/20	1.5-2.5
	C-140	140	60	54	20	1.5-2.5
	C-150	150	60	54/64	18/20	1.5-2.5
	C-160	160	60	54/64	18/20	1.5-2.5
	C-180	180	60	64	18/20	1.5-2.5
	C-200	200	100	64	18/20	1.5-2.5
	C-250	250	100/150	64	18/20	1.5-2.5



#### Z-PURLIN SPECIFICATION

Z Purlin Shape	Model	Section Size					
		H (mm)	h (mm)	B1 (mm)	B2 (mm)	Q (mm)	t (mm)
	Z-100	100	50	48/50	52/54	15	1.5-3.0
	Z-120	120	50	50	54	20	1.5-3.0
	Z-140	140	60	50	54	20	1.5-3.0
	Z-150	150	60	50/60	54/64	18/20	1.5-3.0
	Z-160	160	60	56/60	60/64	18/20	1.5-3.0
	Z-180	180	60	60	64	18/20	1.5-3.0
	Z-200	200	100	60	64	18/20	1.5-3.0
	Z-250	250	100/150	60	64	18/20	1.5-3.0



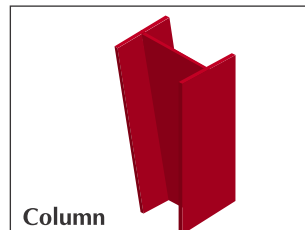


### PRIMARY FRAMES

Primary Frames, which form the rigid frames of the building and are extensively used in industrial and commercial buildings constructions . We manufacture these frames using highest grade raw material, which is sourced in from trusted suppliers of the market . We can offer primary framing systems in both symmetrical and asymmetrical at the ridge line.

Primary Frames includes :

- ❖ Column
- ❖ Rafter
- ❖ Crane Brackets
- ❖ End wall Frames
- ❖ Mezzanine beams and joists



Column



Rafter



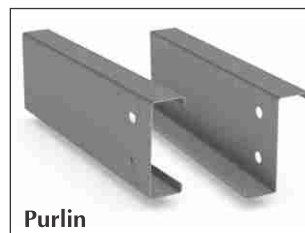
Crane Brackets

### SECONDARY FRAMES

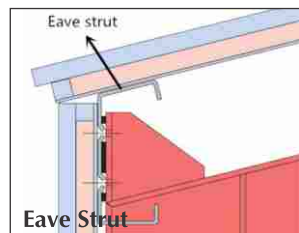
Secondary Frames basically support the roof wall sheeting and provides an effective distribution of load and subsequent stress to the primary frames to provide stability to the building . We offer secondary frames at pocket friendly prices.

Secondary Frames includes :

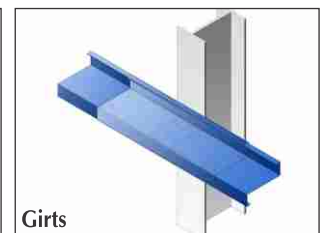
- ❖ Purlins (C&Z)
- ❖ Girts
- ❖ Eave Struts
- ❖ Bracings
- ❖ Miscellaneous Structural Parts



Purlin



Eave Strut



Girts

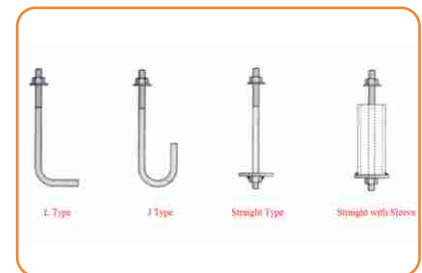
### MISCELLANEOUS STRUCTURAL PARTS



Metal roofing fasteners



Nuts and Bolts



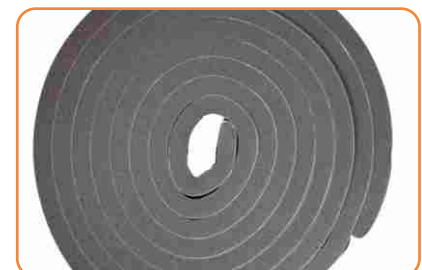
Anchor Bolts



Hillside washer



Sealants



Closures

## OUR PROJECTS







## OUR PROJECTS





**SAMSUNG**





## OUR PROJECTS





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EXCELLENCE THROUGH INNOVATIONS

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