



T  B S

CONSTRUCTION & ENGINEERING PVT. LTD.

Inspired by Innovation



Dear Customer,

Over the years , we at TABS Construction and Engineering Pvt. Ltd. have successfully built up an undisputed reputation for our organization by establishing unmatched quality, flexibility and reliability in all our products and services. The essence of this achievement has been our commitment to exceed our customers' expectations and their valued patronage.

Today, as our business is growing to shape new horizons, we remain committed to our customer centric philosophy of providing high quality products and services fully complying with the highest international standards , developing mutually beneficial partnerships with our customers, investing in human capital and maintaining our position as a good corporate citizen.

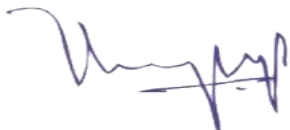
As a note-worthy player in the region with ambitious growth plans on the anvil, we have embraced the task of re-branding ourselves externally and internally, to prepare for all our future endeavors. Through the promise of providing "The Best Service", TABS Construction and Engineering Pvt. Ltd. will continue to strive not only to maintain but enhance its reputation by a process of continuous improvement in every area of its operations.

As an existing or potential customer, your unstinted support would pave the way to our continued growth and success in the years ahead.

I take this early initiative to welcome you to experience our professional service. Should you have any further queries , it would be our pleasure to be at your service round the clock. Yes, round the clock.

A.B. Thankappan

Managing Director



TABS Construction and Engineering Pvt. Ltd.

Products and Services

TABS has following products and services under various divisions.

A. MANUFACTURING

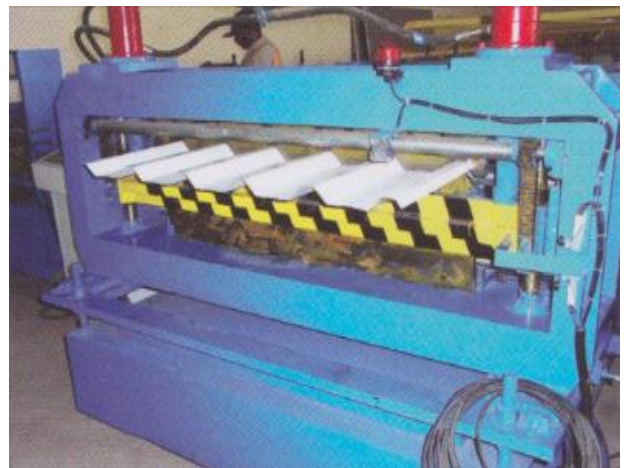
Steel Structure Fabrication

All the steel buildings need the steel structure. It forms the frame work of the entire building. TABS has the inhouse capacity to carry out the Design, Detailed Engineering and fabrication of Primary and Secondary Structures such as Columns, Rafters, Purlins, Girts etc.



Corrugated Roofing Sheets

Essentially this forms the roofs of the steel buildings. The Pre Painted GI and Aluminium Coils are fed through the roll forming machines and cut to required length. This is then fixed on to the purlins by means of Self Tapping Screws.



PU Sandwich Panels

Most of the steel buildings in this part of the country are using the sandwich panels for roofs in order to resist the heat. These panels are essentially manufactured by injecting eco friendly Polyurethane, which is highly insulating material, between two corrugated sheets. Tabs Steel is equipped with highly sophisticated Sandwich panel press and foaming machines to meet any requirements of the clients.



Z & C Purlins

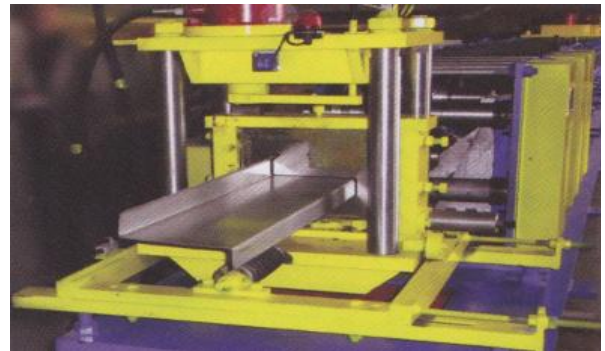
Purlins are the secondary structures which form the part of the steel building. Roof sheets are fixed on to the purlins by means of self tapping screw.

Trimmed Flashings

These are the accessories required for the steel buildings. Trimmed flashings are formed from the color coated coils which are cut to required lengths and formed in various shapes with the help of bending and folding machines.

Color Room Panels

Cold room panels are PU injected panels of higher PU thickness compared to the ordinary sandwich panels. Due to excellent heat resistance capacity, this is being used in cold room applications.



B. CONTRACTING

Civil Building Contracting

TABS Construction and Engineering Pvt. Ltd. takes up Civil Construction activities related to our main activity of warehouse and factory applications and also labour camps or any other external works such as underground tanks, external wall and paving etc. TABS has acquired a number of construction equipments to be self sufficient in order to accomplish the job. It has also a full Estimation and Engineering Team to execute any complicated job.

Steel Building Contracting

Apart from the Turnkey jobs, TABS also takes up steel building contracting jobs alone that includes the main steel structure, secondary steel structure, roof cladding and wall cladding and heavy equipment fabrication.

C. STRUCTURAL ERECTION

TABS Constructioin and Engineering has its own domain expertise in the erection area of the steel building and structures. Tabyan has acquired erection equipments like Cranes, Boom Loaders, Man Lift, Scaffolding and necessary other equipment and tools for the erection activity.



Basic Building Parameters

Pre-engineered buildings are defined by the following basic parameters: Building Width, Length, Height, Roof Slope, End Bay Length, Interior Bay Length and Design Loads.

Building Length

Building length is the distance between the outside flanges of endwall columns in opposite endwalls. It is a combination of several bay lengths.

Building Height

Building height is the eave height, which is usually the distance from the bottom of the main frame column base plate to the top outer point of the eave strut. When columns are recessed or elevated from the finished floor, eave height is the distance from the finished floor level to the top of the eave

Building Width

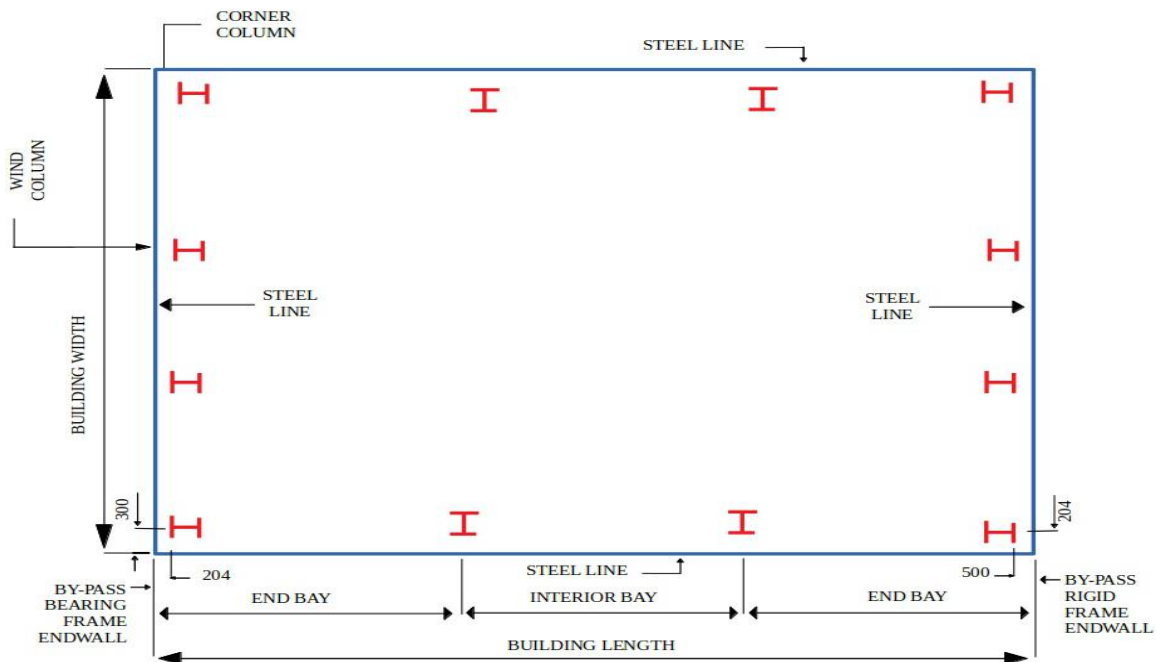
No matter what primary framing system is used, the building width is defined as the distance from outside of eave strut of one sidewall to outside of eave strut of the opposite sidewall.

Roof Slope (x/10)

This is the angle of the roof with respect to the horizontal. The most common roof slopes should not be less than 0.5/10. Any practical roof slope is possible.

End Bay Length

This is the distance from the outside of the outer flange of endwall columns to the center line of the first interior frame column.



Interior Bay Length

This is the distance between the center lines of two adjacent interior main frame columns. The most common bay lengths are 6.7.5, and 9 meters. Any bay length is possible up to 15 meters.

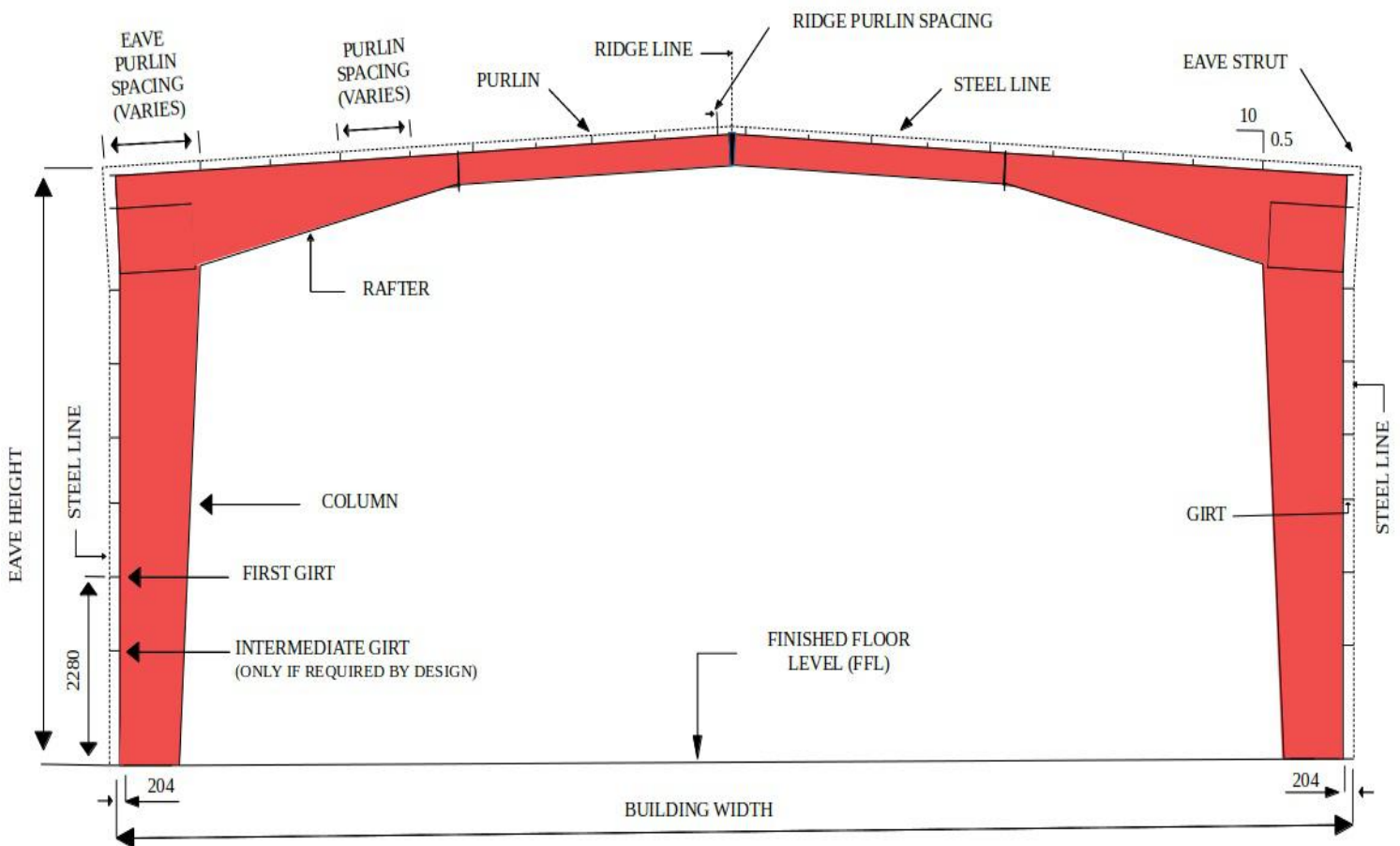
Design Loads

Unless otherwise specified, TABS Pre-Engineered Buildings are designed for the following minimum loads :

Roof Live Load: 0.57 Kn/m²

Design Wind Speed: 140 km/h

Design parameters of snow loads, earthquake loads, collateral loads, crane loads or any other loading condition must be specified when requesting a quotation. Loads are applied in accordance with American codes and standards applicable to pre-engineered buildings unless otherwise requested at the time of quotation.



Cladding Components

Profiled Sheet - Aluminium

SPECIFICATIONS OF ALUMINIUM

Alloy & Temper

Aluminium alloy used in production of the profiled sheets is A3105-H16 for mill finish and H46 for pre-aired.

Mechanical Properties

Yield Strength- Min 140 Mpa

Modulus of elasticity – 69000

Co-efficient of Linear Thermal Expansion – 24×10^{-6} per deg. C

Durability

When exposed to the atmosphere natural aluminium forms a thin layer protective oxide coating on this surface. Thanks to this composition, the roofing element is adequately protected under normal conditions of exposure to atmospheric conditions, especially in coastal and industrial area.

Fire Property

Aluminium is classified as a non-combustible material, defined by BS 476: part 4: 1970. Roof Coverings of aluminium alloy are rated EXT AA when tested in accordance with BS476: Part 3: 1958

Surface Finishes

Mill Finish – This is the natural untreated surface of the metal as it leaves the rolling mill.

Polyester Colour Coated – An economical, long-life coated, factory applied polyester on the exposed side and a lacquer coating on the reverse side. This is available in RAL as well as BS colour shades.

PVF2 Colour Coated - Excellent U.V. Resistant, long-life coating of 2 coats of factory applied PVF2 on the exposed side and a lacquer coating on the reverse side. Available in RAL as well as BS color shades.

Profiled Sheet - Steel

SPECIFICATIONS OF STEEL

Steel profiled sheets shall be either of Aluzinc Coated (55% Aluminium, 45% Zinc Alloy) OR Zinc coated.

Alloy & Temper

The base material shall confirm either ASTM A653/ ASTM A653M LockForming Quality OR Structural Quality Grade D (Subject to Availability) OR Zinalume coated confirming to ASTM A792M.

Mechanical Properties

Ultimate Tensile Strength – Min 350 N/mm²

Yield Strength – MIN 250 N/mm²

Modulus of Elasticity – 200000 N/mm²

Co-efficient of Linear Thermal Expansion – 13×10^{-6} per deg.C

Fire Property

Steel is classified as a non-combustible material.

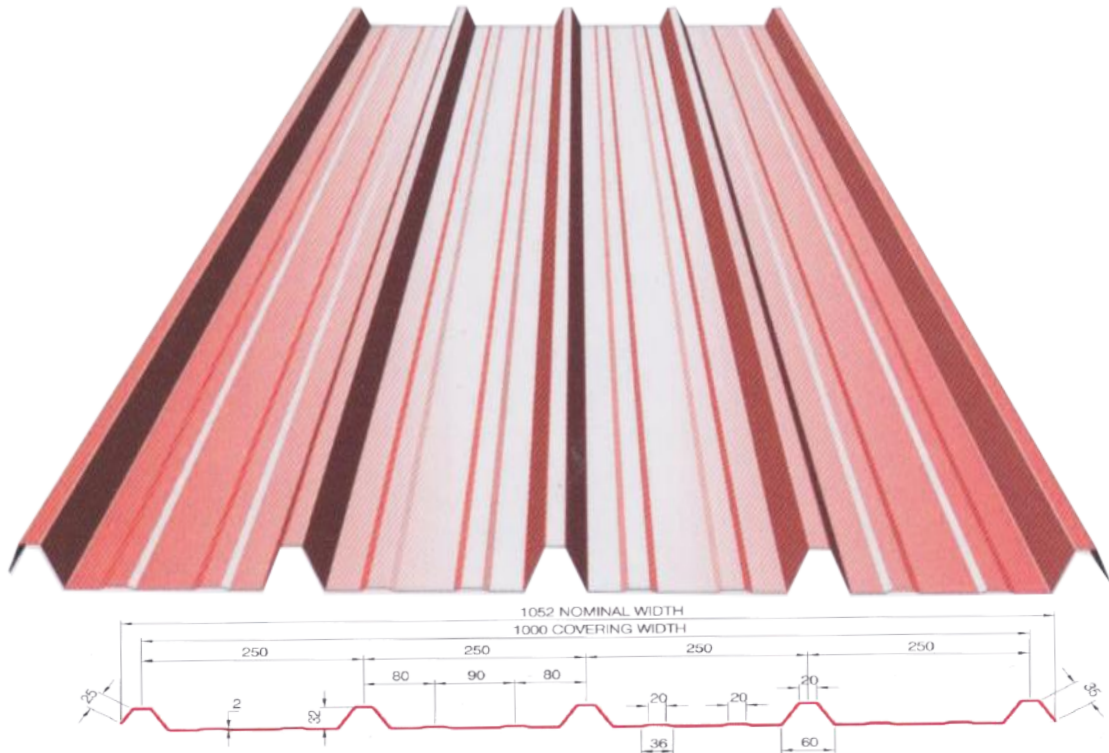
Surface Finishes

Mill Finish – This is the hot dip galvanized finish with Regular Spangle OR Minimum Spangle OR Skin Passed and Chromated surface. In Case of Galvalume it is surfaced treated natural finish.

Polyester Colour Coated - Polyester is an economical long life coating with external coating of 17-22 microns and internal 5-8 microns service coat. External coating will be available in both RAL & BS colour shades. Internal coating is standard grey colour but on request can be supplied in other RAL shades.

PVF2 Colour Coated – This coating has high resistance to fading due to excellent UV resistance. Available in BS and RAL colour shades

Profiled Sheet - TABS 32/250 - Aluminium/Steel



ALUMINIUM

Allowable Working Load Chart (N/m²)

Thickness in mm	0.5		0.7		0.9	
	S	M	S	M	S	M
MI (mm ⁴ /m)	101543		140947		179668	
WEIGHT (kg/m ²)	1647		2.306		2.85	
Z x TOP(mm ³ /m)	1682		2985		4332	
Z x BOTTOM(mm ³ /m)	2230		3188		4065	
Span in mm	S	M	S	M	S	M
1000	1040	1553	1465	1737	1588	1884
1250	969	1246	1161	1371	1215	1401
1500	908	1077	101	1205	1101	1306
1750	863	1028	969	1130		
2000	826	979	923	1094		

DEFLECTION: L/200

S = Single Span M = Multi Span

CAN PRODUCE ANY LENGTH UPTO 16 METER WIDTH OF 0.94

STEEL

Allowable Working Load Chart (N/m²)

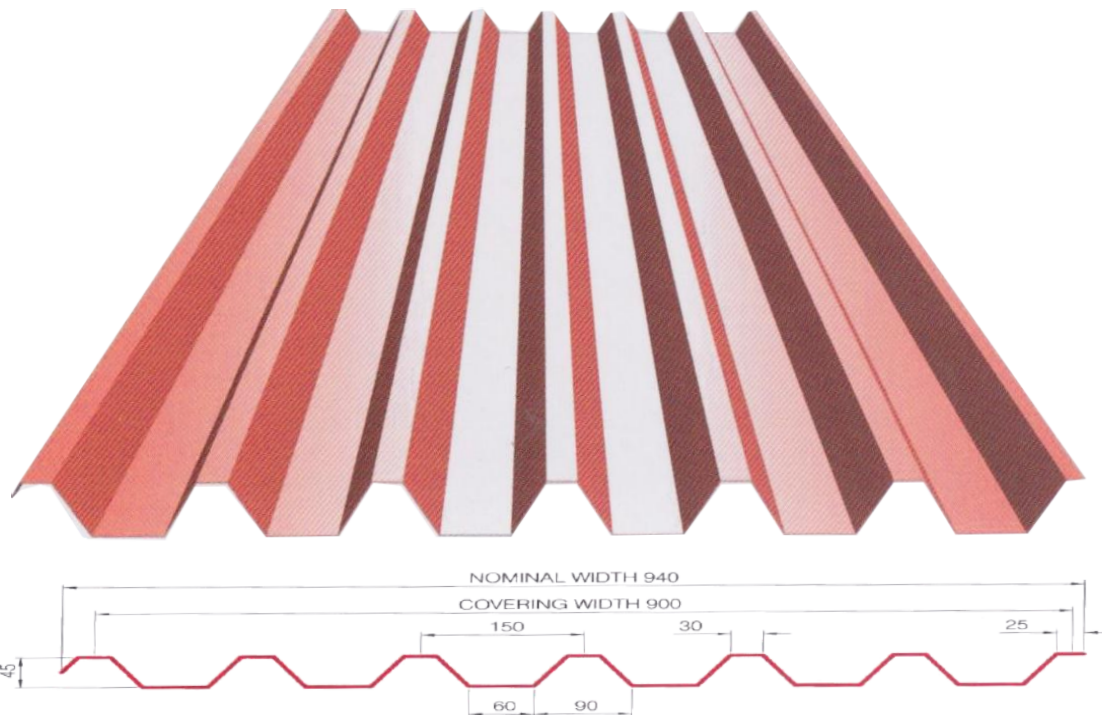
Thickness in mm	0.5		0.7		0.9	
	S	M	S	M	S	M
MI (mm ⁴ /m)	101543		140949		179665	
WEIGHT (kg/m ²)	4.806		6.728		8.65	
Z x TOP(mm ³ /m)	2949		4590		6132	
Z x BOTTOM(mm ³ /m)	2519		3942		5261	
Span in mm	S	M	S	M	S	M
1000	1506	1785	1695	2010	1853	2197
1250	1410	1670	1588	1887	1739	2061
1500	1315	1559	1981	1755	1619	1919
1750	1255	1483	1419	1671	1540	1836
2000	1195	1417	1345	1575	1470	1744

DEFLECTION: L/200

S = Single Span M = Multi Span

CAN PRODUCE ANY LENGTH UPTO 16 METER WIDTH OF 0.94

Profiled Sheet - TABS 45/150 - Aluminium/Steel



ALUMINIUM

Allowable Working Load Chart (N/m²)

Thickness in mm	0.5		0.6		0.7		0.8		0.9		1.0		1.2	
MI (mm ⁴ /m)	198571		236756		274441		311630		348329		384540		455519	
WEIGHT(kg/m ²)	1.85		2.22		2.59		2.96		3.33		3.70		4.44	
Z X TOP (mm ³ /m)	7671		9147		10605		12044		13464		14867		17616	
Z X BOTTOM (mm ³ /m)	10389		12385		14353		16294		18209		20098		23797	
Span in mm	S	M	S	M	S	M	S	M	S	M	S	M	S	M
1000	3325	4156	3963	4954	4593	5741	5214	6518	5827	7284	6431	8039	7615	9519
1250	2128	2660	2536	3170	2939	3674	3337	4171	3729	4662	4116	5145	4874	6092
1500	1478	1847	1761	2202	2041	2552	2317	2897	2590	3237	2857	3573	3385	4231
1750	996	1357	1187	1618	1376	1875	1563	2128	1747	2378	1929	2625	2285	3108
2000	667	1039	795	1238	922	1435	1047	1629	1170	1821	1292	2010	1531	2380

DEFLECTION: L/200

CAN PRODUCE ANY LENGTH UPTO 16 METER WIDTH OF 0.94 METER

S = Single Span M = Multi Span

STEEL

Allowable Working Load Chart (N/m²)

Thickness in mm	0.45		0.55		0.65		0.70		0.80		0.90	
MI (mm ⁴ /m)	179290		217726		255660		274441		311630		348329	
WEIGHT(kg/m ²)	4.79		5.85		6.92		7.45		8.51		9.58	
Z X TOP (mm ³ /m)	6925		8412		9878		10604		12043		13464	
Z x BOTTOM (mm ³ /m)	9382		11391		13373		14353		16294		18210	
Span in mm	S	M	S	M	S	M	S	M	S	M	S	M
1000	6473	8092	7859	9824	9227	11533	9904	12379	11243	14054	12565	15706
1250	4143	5179	5030	6287	5991	7381	6338	7923	7196	8995	8041	10052
1500	2877	3596	3493	4366	4160	5126	4402	5502	4997	6246	5584	6980
1720	2114	2642	2566	3208	3056	3766	3281	4042	3671	4589	4103	5128
2000	1618	2023	1965	2456	2340	2883	2476	3095	2811	3514	3141	3926
2250	1269	1593	1541	1941	1810	2278	1943	2481	2206	2776	2466	3102
2500	925	1295	1124	1572	1319	1872	1416	1981	1608	2249	1798	2513

DEFLECTION: L/200

CAN PRODUCE ANY LENGTH UPTO 16 METER WIDTH OF 0.94 METER

S = Single Span M = Multi Span

Highlights of PU Injected Sandwich Panels

HIGHLIGHTS

- We have invested substantially in the most advanced continuous manufacturing equipments.
- Leak proof profile with double endlap.
- Can produce any length upto 12 m with width of 1.035 mtr.
- Effective protection of the thermal insulation against interstitial condensation.
- Thermal insulation efficiency of economically unmatched standards 25 mm to 50 mm depths.
- Matching range of double skin translucent sheet.
- Extensive choice of RAL Colour coat finishes and colours.
- Outstanding Insulating Properties – Low thermal conductivity due to chemical structure of polyurethane.
- Low dead load – Due to the combination of lightweight materials.
- Capable of long spans – fully bonded panels allow even longer spans.
- Painted materials – Coal coating system.
- Complete service – Complete design, supply & erection package.
- Material delivery – Dependable delivery dates – Due to speed of manufacture and delivery procedure.

POLYURETHANE

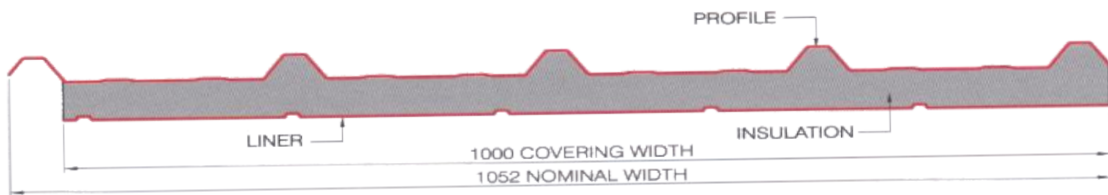
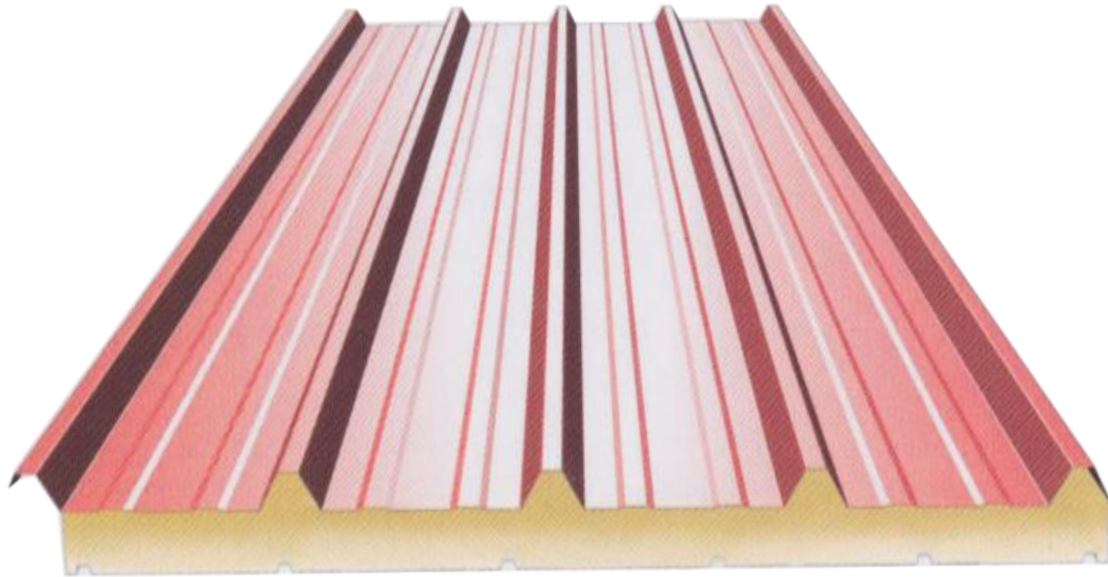
Average density: 35 Kg/M³ TO 40 Kg/M³

Thickness: 35 mm to 100 mm

PU Thickness in MM(t)	35	50	75	100
U-Value in W /m ² K	0.54	0.38	0.28	0.19



Sandwich Panel - TABS 32/250



Project Photos

Modus Logistics, Kochi, India (Supply and Erection)



Project Photos

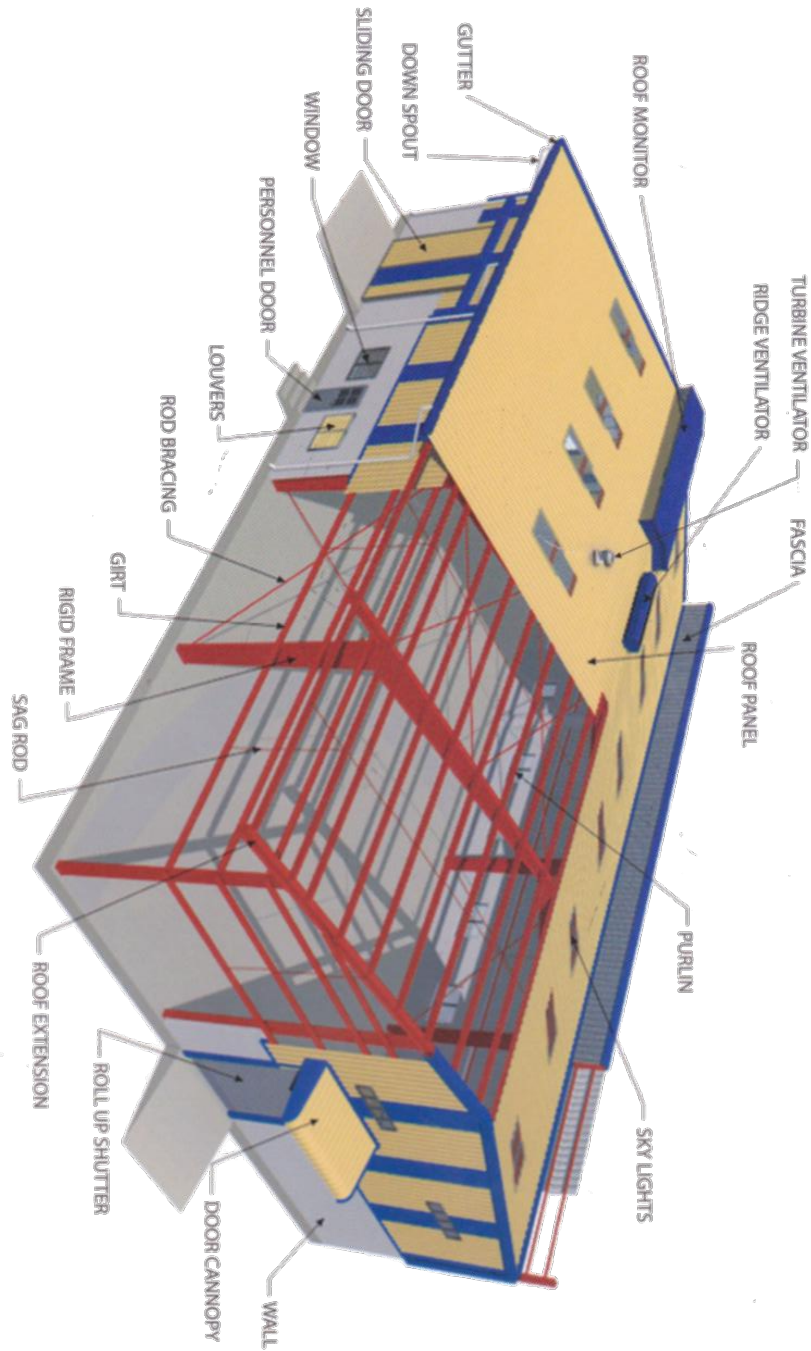
Warehouse Complex, Kochi, India (Supply and Erection)



Project Photos

Sabu & Cyprian Warehouse, Kochi, India (Supply and Erection)





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