

# SUMIRAJ INDUSTRIES PVT. LTD.



**Company Catalogue**

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## About Us

We at **Sumiraj Industries Private Limited**, started our company with a visionary approach to uplift the trend, facility & reliability in Pre-fabricated construction solutions. We commenced operational in 2017 and have already started penetrating the market with full swing. As a manufacturer and service provider, we are engaged in delivering high-tech solutions to the required industries & individuals who are looking for quick results for pre-engineered buildings & relative items. Our products range from Pre-Engineered Buildings, Deck Sheets, Z & C Purlins, Roofing and Wall Cladding Sheets to various other items. We manufacture these items in adherence to latest industrial standards, while using the most advanced fabrication techniques & technology. For rendering the Repairing & Maintenance Services of aforementioned items, we rely upon technological advancement, our team & other resources.

In this effectively booming industry, we are notably one of the most quality-conscious solution providers who are committed towards contributing in this field of manufacturing, engineering & development with innovative ideas and work approach. All we seek for the future is to solidify our status in the industry as a trusted, promising and customer-friendly firm.

## Vision

To be India's most reliable and innovative manufacturer and service provider in the Pre-Engineered Building Industry.

## Mission

Sumiraj Industries Pvt. Ltd. will consistently be the preferred partner of steel building users and their consultants. We give value for money by prompt delivery of high quality buildings, supported by accurate engineering designs through our investments in people, technology and manufacturing capacity. Profitable growth and our passion for innovation let us continue to offer rewarding careers to our employees and continuously provide excellent service to our customers.

## Our Team

Sumiraj Industries Private Limited is running effectively under the leadership of Mr. Mihir Singh. Our team leaders guide, motivate and give directions to the entire team of professionals for always delivering an enhanced & unique solution to the respective customers. In the field of providing high-tech pre-engineering solutions, our team acquires worthy skill set. Each engineer, technician, marketing personnel and other working employee at our firm is a great resource to us and serves for organizational growth & development.

## WHY SUMIRAJ

Manufacturing organizations throughout have made **Sumiraj Industries** a perfect choice for steel fabrication facilities. If you want a high quality building from a name you can trust, look no further than Sumiraj. We design the buildings to provide more profit producing space. Our steel fabrication facilities may be customized to fit your needs and are easily expanded to accommodate future growth:

- Top-quality material is used for Pre-fabrication of material.
- Latest industrial norms & standards are adhered.
- Ability to provide cost effective solutions
- A commitment to Quality in service and products all the time.
- Industry leading prices & business deals are offered
- Committed to deliver the material in time.
- A team of dedicated Architect, Mechanical Engineers and Marketing Professionals.



## INFRASTRUCTURE

### Manufacturing

We have a state of the art manufacturing facility for making high quality pre-engineering buildings at Greater Noida (U.P.) We have an advanced production line with latest technologies automatic H beam welding machine and CNC Plasma systems for manufacturing high quality Pre engineered steel structures. Also we have in house facility of manufacturing of roofing sheets, all cold formed sections and roofing accessories. The total manufacturing facility of our manufacturing unit has a composite capacity to produce approx. 15000MT of steel structures per annum. We maintain high quality standards and believe in delivery of best quality products at the most reasonable prices.

### MACHINES THAT CREATE YOUR DREAM BUILDING:

- ▶ CNC Plasma Cutting Machine
- ▶ CNC Oxy fuel Cutting Machine
- ▶ MS Shearing Machine
- ▶ Radial Drilling Machine
- ▶ CNC Bending Machine
- ▶ Automatic H Beam Saw Welding Line
- ▶ Mig Welding Machines
- ▶ Shot Blasting Machine
- ▶ Airless Spray Painting Machines
- ▶ Metal Sheet Roll forming Machine
- ▶ C&Z Section Forming Machine

## CNC PLASMA MACHINE

CNC plasma machine uses a plasma cutter to cut thin to thick metals along a multi-axis grid. The CNC method provides an advantage over handheld plasma cutting tools due to the cut being programmed and controlled by a computer instead of human motion. Because a CNC plasma machine is operated via CNC Control, it is extremely precise. Once the cut is programmed, the torch moves in an exact path set by the computer that is reliable and consistent every time. This leads to unmatched precision on essentially any cut, no matter how complex or refined.



## H BEAM WELDING LINE

H beam welding machine consists of an assembling machine, front welding machine, back welding machine and the transmission conveyors. It is used for manufacturing of high quality H beam. The annual welding capacity of the H beam machine is 12000 tons. The maximum welding speed can reach about 2M/Min.

Our H beam welding line M1500 for H profile steel is a wonderful technical product that integrates mechanical, electric and pneumatic technologies. The machine using advanced technology of single arc double wire welding, greatly increase the production efficiency.



## CNC BENDING MACHINE

The CNC bending is very easy to operate and is a less labor intensive machine. The CNC Bending incorporates a modern design which enables the operator to easily arrange the sequence of bends. It also assists the operator to quickly manufacture the required product. Moreover the operator no longer has to estimate the required amount of pressure in order to create a specific degree of bend. Even the other factors such as length of flange, kind of material, amount of thickness, and degree of bend can be directly entered into the CNC control unit. The part to be manufactured can also be viewed in either the 2D or 3D finished version.

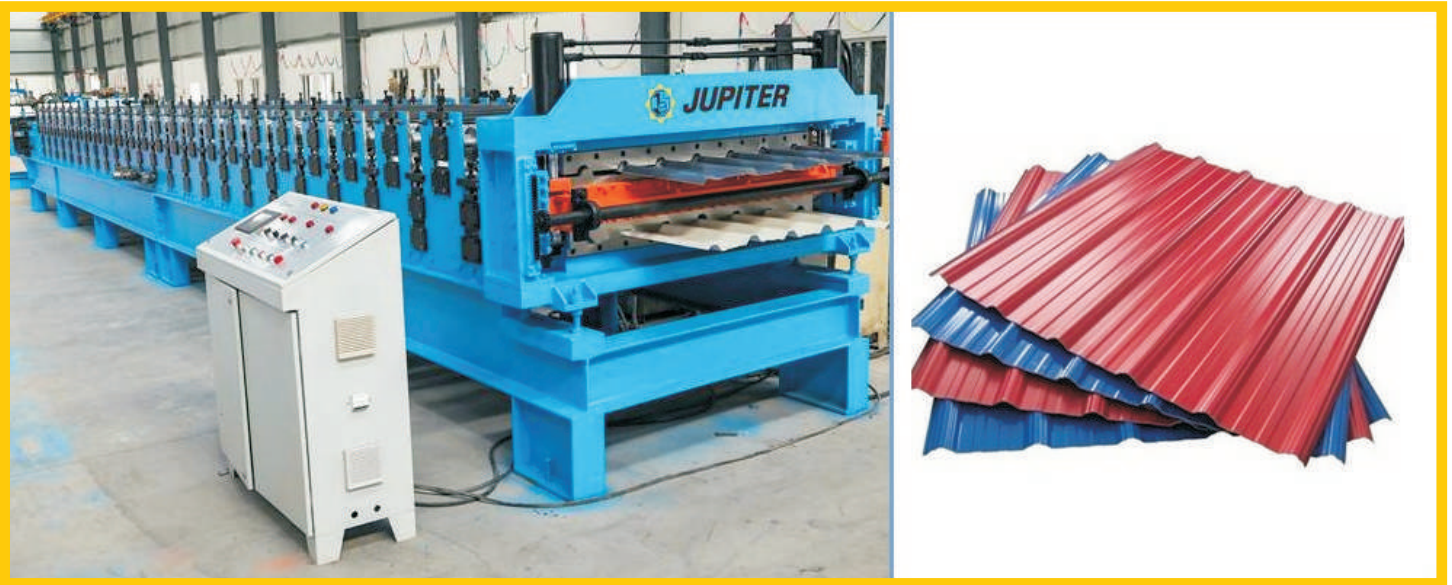


## C&Z ROLL FORMING MACHINE

The C&Z purlin forming machines are specifically used to manufacture multi-size C and Z purlin. The machine's parts are all made with precision and experienced personals, with optimum quality roll tools so you never have to worry about the product quality. This machine can make both C and Z shape purlins in different sizes with online punching.



## ROLL FORMING MACHINE



## MECHANICAL PRESS MACHINE



## RADIAL DRILL MACHINE



## Design & Engineering



Our Design and Engineering team having experienced in working with PEB industries. We have thorough knowledge of interpreting & applying several design codes such as Indian Code, British Code, American Code, Euro Code and International Building Design Code. Our design department uses the latest versions of internationally renowned industry standard 3D and 2D Software such as Tekla, MBS and Auto CAD. From the detailed 3D model in Tekla structure, NC data would be generated and directly sent to respective CNC machines. This would ensure high precision of all structural components in manufacturing.

## Project Execution

There has been a continuous effort to provide customers with the most efficient, effective and safest full-service steel construction. Furthermore, by utilizing the abilities and knowledge of our existing employees, Sumiraj Industries can successfully perform any size project and provide clients with premier construction resources. No matter the size, complexity or location of your project, we can provide you with personalized service, reliability, and construction quality you deserve. Our erection team comprises of highly qualified, trained, and professionals who have carried out a large variety of projects for various companies in the region. The erection team is well monitored by our engineering, plant and the projects management to execute the planned erection as per the schedule.

## Safety First

India has seen all extreme conditions and so Sumiraj Industries. Our buildings are designed with international standards of safety.

### **We consider parameters like**

- ▶ Wind Load (Wind Speed)
- ▶ Seismic Zone (Earthquake Zone)
- ▶ Design Live Load on Roof
- ▶ Design Live Load on Frames
- ▶ Dead Load
- ▶ Collateral Load
- ▶ Future Expansion

## Zero Accident Policy

Training imparted to employees and manuals are in placed spread awareness and positive attitude towards safety. Job specific safety procedures are also worked out before executing any project. Under any circumstances, we do not allow our Team to forget that “LIFE” and “SAFE” are Utmost important for us.

## ABOUT PEB

### What is PEB?

Pre-Engineered Building (PEB) is the state of art steel solution for developing an efficient and cost-effective infrastructure. They are designed, pre-manufactured at the factory, and supplied as a fully finished product along with steel structure, roofing, cladding & Building accessories. This concept gives a very fast construction and an excellent accuracy in design, manufacturing and world-class building product with virtually zero wastage. We can use technique for any type of application for building construction what we can imagine in concrete construction with more flexibility compared to concrete. PEB has a very wide scope in terms of flexibility to use and provision to offer any type of shape and capacity.

### PEB Applications

- ▶ Factories
- ▶ Warehouses
- ▶ Workshops
- ▶ Gas stations
- ▶ Showrooms
- ▶ Aircraft hangers
- ▶ Metro stations
- ▶ Vehicle parking sheds
- ▶ Schools, Indoor stadium roofs
- ▶ Bridges, Railway platform shelters
- ▶ Outdoor stadium canopies

## Design Parameters

**Building Width** is the distance from the outside of eave strut of one sidewall to the outside of eave strut of the facing sidewall.

**Building Length** is the distance between the outside flanges of end wall columns in facing end wall.

**The end Bay Length** forms the distance from the outside of the outer flange of end wall columns to the center line of the first interior frame columns.

**The Interior Bay Length** is measured as the distance between the center lines of two adjacent interior main frame columns which usually range from 6m, 7.5m and 9m to 15m.

**The Building height** forms the eave height, which is the length from the foot of the main frame column base plate to the top outer point of the eave strut and can measure up to a height of 30m. In the case of columns that are recessed or elevated from finished floor, the eave height is the distance from finished floor to top of the eave strut.

**The roof slopes**, of thick any practical ones can be constructed by our architects, is the angle which the roof forms with respect to horizontal and are commonly 1/10.

## Types of Pre-Engineered Buildings

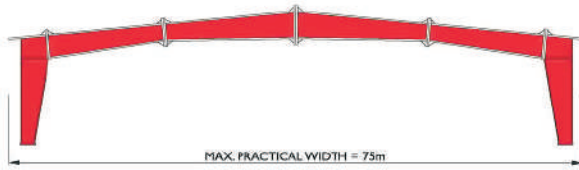
**CLEAR SPAN** – This type of frame is the most preferred and widely used worldwide. It offer clear access to loading and stacking function within the shed. As the pillars or columns are coming at both ends, it gives a very spacious and airy look to the entire shed. We can design these sheds for a width of up to 90 meters. However the water discharge from these types of frames is on both sides of the shed as this is a two slope frame.

**MULTI SPAN** – This type of frame is most suitable for clients who want a wide shed but do not necessarily want it to be clear span because it gives us the economy of Two Sloped Structure and the columns in between distributes the load and thus reduces the weight of the structure. It is the most economical form of frame for large span buildings.

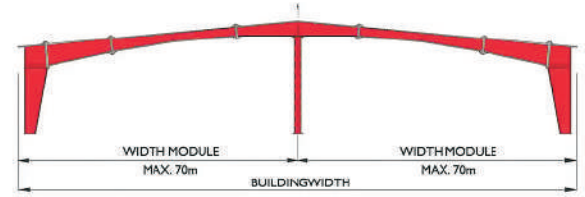
**SINGLE SLOPE** – This type of frames is the preferred choice when clients have restriction to drain water from both sides of the shed. It is also chosen by clients in case their existing sheds require an expansion in width but is not designed to support the load of a lean to shed. In case these sheds are very wide then it becomes economical to make the same in Multi span.

**MULTI GABLE** – This type of frame is the used in case of wide shed and are more economical than the Multi Span frame type. It is lighter because the trusses are smaller hence economical but it comes with a rider that may have a water discharge in the center of the shed which would require an internal drainage line, which is not preferred in most of the industries where water ingress, during unplanned excess rains lead to losses.

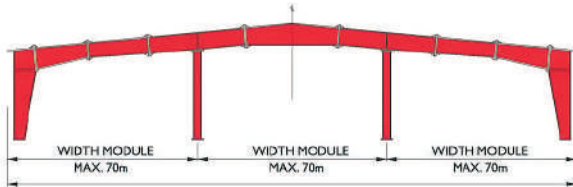
**LEAN TO** – This type of frame is the most preferred type, for sheds requiring an expansion along the width. It requires the original shed to be designed such that it is able to take the load of the expanded shed along with the new shed. Lean to sheds are designed to match the roof slope of the existing shed such that the water is discharged out of the shed.



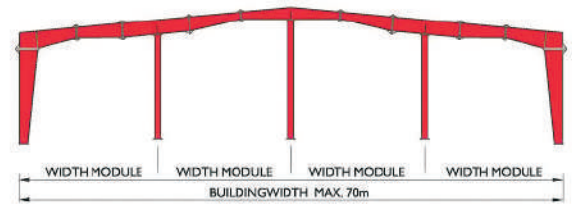
**CLEAR SPAN (CS)**



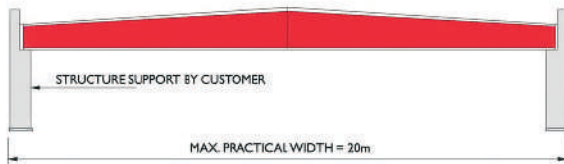
**MULTISPAN "1" (MS-1)**  
(1 Interior Column)



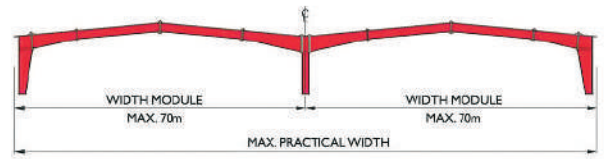
**MULTISPAN "2" (MS-2)**  
(2 Interior Columns)



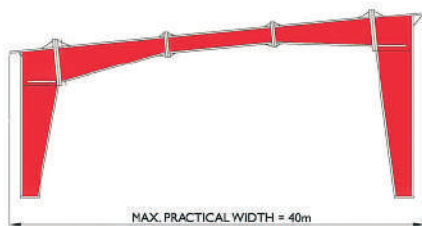
**MULTISPAN "3" (MS-3)**  
(3 Interior Columns)



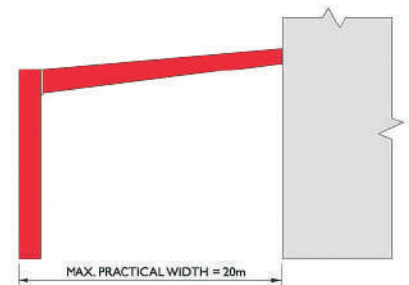
**ROOF SYSTEM (RS)**



**MULTIGABLE "1" (MG-1)**  
(1 Interior Column)



**MONO SLOPE**



**LEAN - TO (LT)**

## PEB Benefits

**Reduce construction time :-** Steel Buildings are typically delivered in just a few weeks. Foundation and anchor bolts are cast parallel with finished, ready for the site bolting. In India the use of pre engineered buildings will reduce total construction time of the project by at least 40%.

**Lower cost :-** Due to systems approach, there is a significant saving in design, manufacturing and site erection cost, the structural elements are shaped to follow the stress diagram of the member, thus reducing weight, cost and load to foundations, the secondary members and cladding nest together reducing the overall transportation cost.

**Low Maintenance :-** Buildings are supplied with high quality paint systems for cladding and steel to suit ambient conditions at the site, which results in long durability and low maintenance costs.

**Flexible of expansion :-** Buildings can be easily expanded in length by adding more bays, also, expansion in width and Height is possible by Pre-designing for future expansion.

**Energy Efficient :-** PEBs can be supplied with polyurethane insulated panels or fiberglass blankets insulation to achieve required 'U' values.

**Large clear spans :-** In PEB the buildings can be given up to 90m clear spans which are the important advantage of PEB with column free space.

**Single Source Availability :-** As the complete building package is supplied by a single vendor, compatibility of all the building components and accessories is assured. This is one of the major benefits of the Pre-engineered building systems.

## OUR PRODUCTS: BUILDING SYSTEMS

### Pre Engineered Buildings

Over the years, our technological improvements have contributed in developing pre engineered buildings. There is no doubt about the fact that its origin dates back to four decades but people have started realizing its potential in recent years only. It has happened because of the way technology has been developing rapidly. Due to the fast-growing technology, we are able to come up with computerized designs. The fact that have made us is be counted among the top pre engineered buildings manufacturers, is that the PEB structures offered by us are sturdy which make them last long. These are steel structures which are carefully built over a structural concept of primary & secondary members, roof & wall sheeting. These are precisely connected to one another and other building components. An increasing number of consumers are now opting for pre engineered buildings systems because of the significant advantage they offer in terms of time and convenience. At Sumiraj, we provide turnkey PEB solutions-right from the structural design stage, till the actual installation.

### Our pre-engineered building systems comprise the following components:

- ▶ Primary framing, i.e the main frames in the structure
- ▶ Secondary framing, namely, the C & Z sections
- ▶ Roof and wall panels, which refer to single-skin and insulated panels
- ▶ Floor systems, which can range from mezzanines and catwalks, to platforms and ramps
- ▶ Other building accessories such as louvers, sliding doors, roll up doors, etc

Depending on the customers' needs, the PEB buildings can be offered with numerous essentials including skylight, turbo vents, wall lights, roof monitors, ridge ventilators, canopies and mezzanine floors etc. Unlike other pre engineered building suppliers, we have the facility to offer the above mentioned essentials. Such types of pre engineered buildings are custom designed and the best part about them is that these are light weight and possess high strength. These are preferred because of their durability, factory controlled quality, flexibility and faster installation.



## PRIMARY FRAMING

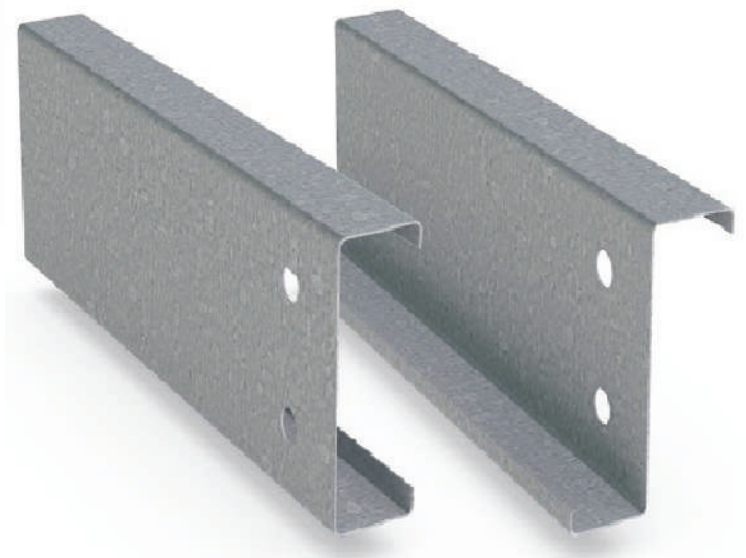
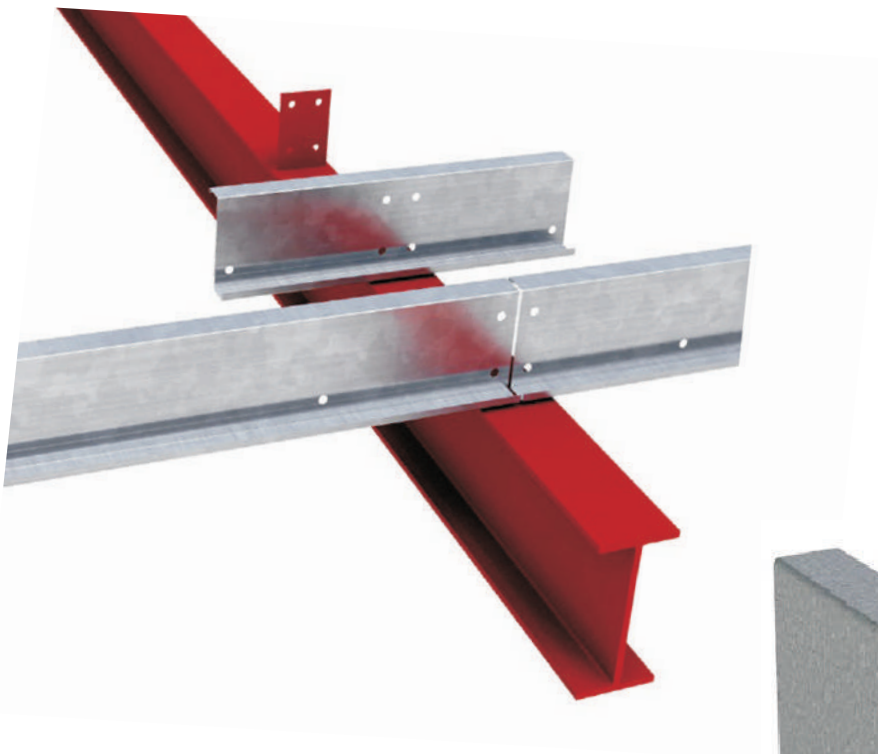
Primary Framing Members are the main load-carrying structural steel components. They may be Clear-span Rigid Frames, Continuous Beam Frames, or Post & Beam Frames. Primary frames are designed in accordance with the steel construction manual published by American Institute of Steel Construction (AISC). Manufacturing dimensional tolerances are in accordance with the requirements of 'Metal Building Manufacturers Association' (MBMA) of USA, "Low Rise Building Systems Manual". Besides AISC and MBMA, we also design buildings with IS-875, 1984 and IS-875, 2007.

Built-up sections are fabricated from hot rolled steel plates conforming to ASTM A 572M grade or equivalent with minimum yield strength of 345N/mm<sup>2</sup> (50ksi). The most common primary framing systems are illustrated here. All structures shown are symmetrical about the ridge line. Framing systems asymmetrical about the ridge line and Multi span Framing Systems with unequal width modules are possible too. Practically any frame geometry can be erected.



## Secondary Framing Systems

Purlins, girts and eave struts are manufactured in High grade steel plate which is conforming to ASTM A607 Grade 50. Factory painted with a minimum of 40 microns (DFT) of primer as our standard or any other paint system as per customer choice. Thickness range 1.0mm to 3.0mm thickness and depth range 70mm to 300mm.



## Roofing and Wall Cladding Systems

Metal Profile Sheets are built from stainless steel, aluminum, copper and tin metals. This sheet has prime color coating all over the roof and its surface. Here, the thickness of our coating depends on the weather conditions and on usage. Our sheets are supremely durable as both sides of the surface are galvanized and coated with a standard alkali wash coat. Further, the sheet holds high resistance strength against tear off and unwanted damage.

The profiled steel panel is fixed to the secondary framework by self-drilling screws. The overlaps of this panel are fastened with stitching screws. The secondary framing is normally Z purlins fixed with 1.5m purlin spacing to the primary framing. The thermal insulation varies depending on the type of the built-up roof.

Our 200 Hi-rib Profile is manufacture from Pre-painted Galvalume steel (PPGL) AL-Zn Alloy coated steel AZ-150 as per ASTM-1397 (Bare Galvalume) and color coated Al-Zn Alloy coated steel (Color Coated Galvalume) with a cover width of 1000mm, pitch of 200mm and a crest height of 28mm.

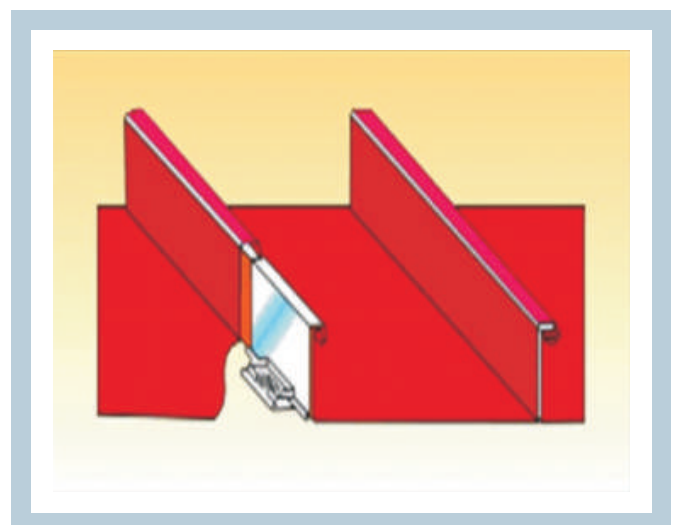
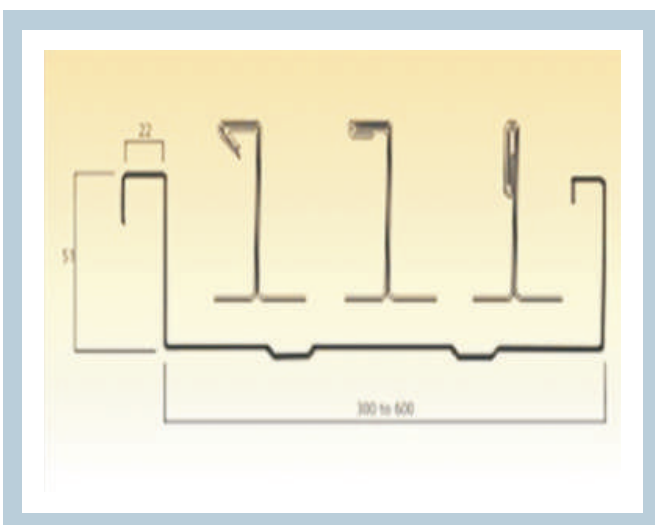
### Features

- ▶ Attractive in appearance
- ▶ Anti-corrosive
- ▶ Excellent ventilation
- ▶ Resistant to extreme weather
- ▶ Made of recyclable materials and thus can be 100% recycled
- ▶ Availability in various color
- ▶ No tear-off or wear-off
- ▶ Easy to install
- ▶ Owing to galvanized surface, there is good finish and shining
- ▶ Low heat conductivity
- ▶ Available at reasonable cost



## Standing Seam Roofing System

We offer innovative and technologically advanced concealed fixed and zipped-up standing seam system that creates a continuous weather tight roof. Sumiraj is offering outstanding design potentiality; performance and durability making our Standing Seam Roofs look great aesthetically along with offering security and weatherproofing solutions. Due to concealed fitting the risk of leakage is reduced. Our sheets are manufactured using supreme quality material paired with contemporary techniques following the industry norms making us one of the most trusted Standing Roof Sheets Manufacturers in India.



## Deck Panel for Mezzanines

Deck sheets/Panel is used on mezzanine beams for flooring. The lightweight steel decking panel reduces concrete usage to provide a cost-effective and alternative floor solution that is easy to install. GI deck sheet is provided for the suitable load on the floor and covered with form concrete.

The sides and top ribs are embossed and provides added grip and minimize slip by creating a bond with concrete as done with normal reinforcement. Deck Panel provides positive reinforcement and permanent framework. Conventional Shuttering system to cast the concrete slab is avoided resulting in Saving Valuable time and very good finishing.



## BUILDING ACCESSORIES

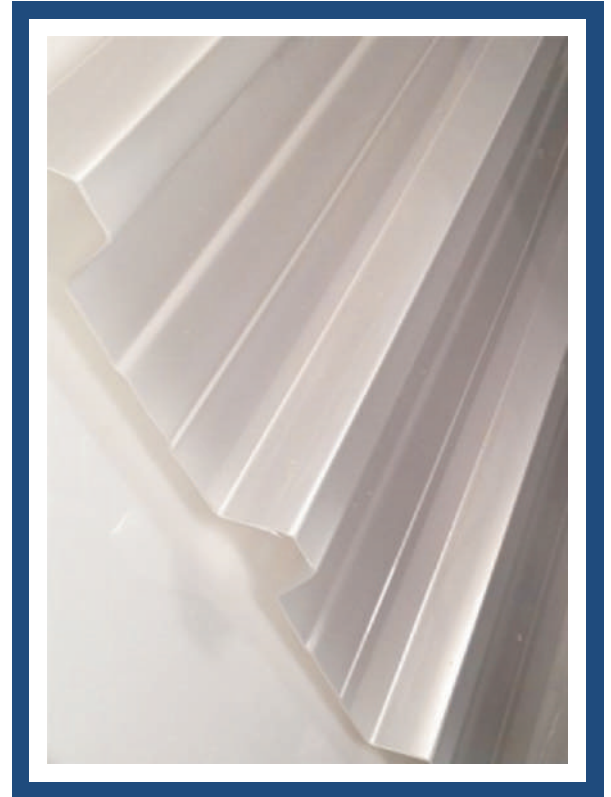
**POLYCARBONATE SHEETS :-** Poly carbonate sheets are extensively used in Industrial Applications. These are used for Industrial Sky Lights and North-Light Glazing to provide daylight solutions in Industrial and Commercial Structures. These poly carbonate roof sheets are available in a variety of profiles matching to commonly used industrial roofing sheets that include Asbestos cement sheets & metal corrugated sheets, corrugated roof sheets and plastic Corrugated roof sheets.

Poly carbonate are light transmitting material (elements filling building envelope openings) a portion of, the roof of a buildings space (generally taken as 3% of the roof area) for allowing natural light to enter the building.

### Advantages :-

- ▶ High-Quality.
- ▶ Nearly Unbreakable.
- ▶ Lightweight.
- ▶ UV Resistant.
- ▶ Easy to cut and shape.
- ▶ Resistant to Extreme Temperatures.
- ▶ Protects Against Discoloring.

**Size : Customized**



## AIR VENTILATORS

Our ventilators that we offer, cleans harmful and toxic air that are present inside the working area. They do not consume the electricity and work continuously with the help of wind. It also ensures that longevity of roof, walls and building structures.

### Advantages:

- ▶ No operating cost – runs on wind energy
- ▶ Assured 24×7 Ventilation
- ▶ Replaces hot air humidity, stale air, smoke & gas fumes with fresh ambient air
- ▶ Low payback period
- ▶ Improves human comfort level and productivity

**Sizes:** 12", 18", 21", 24", 28"



## BUBBLE WRAP INSULATION

Reflective Bubble Insulation products consist of one or two layers of Barrier Bubble material laminated between layers of metalized film to provide excellent thermal resistance. The bubble contains an air retention layer designed to provide increased strength and puncture resistance. Insulation is used to either contain heat for maintaining warmth, or to resist heat for maintaining cold. In many applications, radiation is the dominant mode of heat transfer.

### Advantages

- ▶ High Reflection Ratio more than 97%
- ▶ Fire Retardant
- ▶ Environment friendly
- ▶ Dust free
- ▶ Water resistance
- ▶ Anti-radiation
- ▶ Easy to use

**Nominal Thickness :-**

4mm, 6mm, 8mm, 10mm, 12mm, 16mm



## OUR PORTFOLIO

### Erection & Installation

Sumiraj team plans the erection of your Projects on time and within your budget. Our customers can count on our vast experience, capabilities and services of the team to efficiently erect their projects of any size and complexity. Our highly skilled and safety-certified team of operating engineers and workers manage erection of Pre-Engineered Building projects with the highest standards in the industry.

### JALKAL VIBHAG, Nagar Nigam, Varanasi



## LP INFRA PROJECTS, Charkhi Dadri, Haryana







**Contact us :**



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