

# ASTONE METAL PVT. LTD.

AO - 38 & 39, Amrit Steel Compound, SSGT ROAD, Industrial Area, Ghaziabad.  
Ph. 0120-2866117

## About Us

We started our business operation in the year 2004 with a modest beginning and achieved success with our expertise and in-depth knowledge. Establishing ourselves as a prominent brand, we, **ASTONE PRE-ENGINEERED BUILDING & ROOFING SYSTEMS**, are today a name to reckon with. We have set up an outstanding example for others showing that rapid growth is possible by strictly maintaining quality of products and serving the clients with complete dedication. We are engaged in the industry as a distinguished **manufacturer, trader** and **distributor** dealing in a number of products like **Pre Engineered Building Systems, Pre Structured Building Systems, Pre Engineering Steel Buildings, Container/Modular Site Offices, Insulating Roofing and Panel, Trapezoidal Profile and False Ceiling System.**

Our company is professionally managed by a group of technocrats having versatile knowledge and experience in the discipline. High quality and timely delivery are the two parameters, which have kept us ahead in the industry. The company is a perfect blend of man and machine to deliver its clients with the best possible engineering construction services and allied products at the most competitive prices. We are committed to deliver the best, thus leaving no space for quality degradation.

## Our Team

The company is ably supported by a team of experienced engineers, technocrats, project managers, skilled workers and marketing professionals, among others. Their experience, coupled with a sound technical and marketing expertise has propelled the company to become a noted concern in its domain. They possess in-depth knowledge about their area of function, and take up the initiative to manufacture products that are in consonance with the requisite standards of quality. An in-house software automated design and draft enables them to upgrade their skills on a regular basis.

## Product We Offer

When it comes to quality and reliability, the building component offered by **ASTONE PRE-ENGINEERED BUILDING & ROOFING SYSTEMS** is the best without a doubt. The company is a reputed manufacturer and supplier of the following range of products:

- **Insulated roofing**
- **Pre Engineered Building Systems**
- **Pre Structured Building Systems**
- **Pre Engineered Steel Buildings (PEB)**
- **Container Site Office / Residences**
- **Modular Site Office**
- **False Ceiling**

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- **Insulated Cladding**
- **Colour Coated Metallic Roofing Sheets**
- **MEASURE NINE FLOOR & Deck Profile**
- **Metal Crash Barriers**
- **Customized Roll Formed Sections**
- **Site Fabrication of Steel Structures.**

## ***Some of the advantages of our fabrication services for pre-engineered buildings are as follows:***

- 30-50% saving in total project schedule time due to fast delivery and quick site erection . Reduction in project cost due to earlier realization of revenue to owner
- Large clear spans
- Flexibility in expansion in future (in terms of length, width and height)
- Low Maintenance of structures
- Roof and wall insulation of structures to reduce energy costs and improve comfort level inside the building
- Architectural versatility
- Earth quake resistance

## **Our Proficiency in Services and Customization**

We are backed by sophisticated infrastructure and a team of adept professionals that supports us in turning the exact requirements of our clients in to reality. Our industrial expertise of a decade and a half makes us capable in keeping tab of the market developments and rendering our service accordingly.

The knowledge and experience of our technical experts help us in offering the most reliable and cost effective fabrication and erection services to construction industries. Our services are rendered with due care with the assurance and quality and compliance with industry accepted standards and norms.

## **Our Infrastructure**

We are indebted to our strong infrastructural base for our success and the peerless performance that we are exhibiting in the industry. Equipped with in-house production facilities and highly sophisticated machinery like press brake and power press, we are capable of manufacturing world class products and offering them at an affordable price to our customers. The workforce, comprising of highly skilled engineers and other technical and non-technical personnel is experience rich and skilled enough to endow us with an added edge over our competitors.

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## Pre-Engineered Buildings



Pre-engineered buildings have become an essential option for a number of buildings such as warehouses in infrastructure projects and production shops for every conceivable manufacturing activity. With the large, clean floor area free of columns or obstructions, afforded by this concept, PEB's find favour with organisation who have very dynamic plans related to products and process handled by them over a period of time. In warehouses, the pre-engineered building allows for more storage and stacking than the conventional concepts such as concrete and site fabricated structural steel. PEBs permit end user to optimize column free space to suit racking arrangements and internal logistical requirements.

Pre-Engineered Buildings, are best constructed as stand-alone buildings precisely engineered to specific user requirements. PEB components are totally shop fabricated require bolting of components together of the same on site connected to previously completed foundations and sub structures. They feature a structural steel framework of primary and secondary members (rigid frame, beams, purlins and girts, trusses, and columns) on to which cladding and roofing components are attached. In short, pre-engineered buildings can be as unique as your needs.

Buildings intended for commercial, industrial or institutional occupancies can be built precisely, economically & speedily using this concept.

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## PEB steel

We have established facilities in India to design detail and manufacture Pre-Engineered Buildings of any size and nature, with full capability to execute projects of any volume all over India. We are known for maintaining time schedule of projects, which is the prime requirement of today's building industry.

We specialize in providing turnkey solutions in Pre Engineered Buildings in respect of insulation and Noise control. As well to acquaint our capability, we are pleased to present various details including those related to manufacturing of Pre Engineered Buildings, their complete field erection coupled with necessary Roofing and Cladding.



Our installed capacity for Design, Engineering and Manufacture of Pre Engineered Building structures in India is 10,000 MT per Year. Our plant is located at GHAZIABAD, U.P.

## Design for total safety - availability of Code

Any structure that is built, apart from delivering all functional needs of the end user, must provide highest levels safety against all loads and exposure conditions that are expected to be imposed during construction as well as service phases of a building.

PEB, as a concept, finds its strength in its innovative design process. This process derives its strength from optimization by which metal is deployed to its required extent exactly matched to the loads that are incident on that element.

Conventional structural engineering standards, (which are all based on rolled steel components with fixed cross section), sometimes, fail to capture this unique feature available to the end user.

Heartening development in this respect is revision in the Code of Practice for structural steel design (IS: 800-2007) which has been modified substantially in line with this concept.

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However, new standardization work is needed for covering materials such as composites (like sandwich panels), and codes for fire safety.

Highly researched fire safe panels incorporating polyisocyanurate and Mineral Wool cores with excellent fire rating are available from the company to meet all fire safety codes.

Today's PEB structures incorporate panels having steel facings with proven advanced metallurgical protection like aluminum + zinc coatings.

Exterior finishes like organic coating (paint systems) are available having a wide array of colour and shades as colour coated products. India is a country with diverse climatic and environmental conditions and metal exterior surfaces needed are engineered precisely to meet the aggressiveness of the environment in which they have to perform



Our PEB designs follow the latest IBC Codes as well as IS Codes featuring best grades of steel (high tensile or otherwise). Complete design work is carried out in our dedicated design center at Delhi. Our Design team is well equipped with trained and experienced design engineers along with design drafting facilities like AutoCAD, STADPRO, TEKLA Structures and special Customized software which are capable to deliver the best of the Pre Engineered Building products to any user.



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## Building Insulation

Energy efficiency in buildings is achieved through a multi - pronged approach involving adoption of architectural principles responsive to the climate of the particular location by combining efficient insulation with robust structural design. Implementation of energy-efficiency in building systems is almost entirely dependent on effective Thermal Insulation of the building envelope.

India is quite a challenge in this sense since there are as many as six major climate zones:

- Cold and sunny
- Cold and cloudy
- Warm and humid
- Hot and dry
- Composite and
- Moderate

Translation of optimum architectural design in the Indian context therefore poses a major challenge in proper choice and deployment of Insulation, Vapour retarder, Weather protection and aesthetic finishing.

Thermal insulation in buildings plays an important part in achieving thermal comfort for its occupants. Insulation reduces unwanted heat loss or gain and can decrease the energy demands of heating and cooling systems.

In addition to a wide choice of Thermal envelopes, ASTONE provide complete solutions for scientific thermal Insulation of HVAC system elements like chilled water Refrigerant lines, supply and Return air ducting and Air Handling units a hot water plumbing to provide comprehensive energy efficiency to the built environment.

We have joined major players in the Building Sector in India, in co-ordination with energy experts, to draw up ENERGY CONSERVATION BUILDING CODE (ECBC). This aims to specify norms for insulation resistance requirements for buildings servicing various specific functions in various climate zones.

Whether in Industry, commerce or in residential environment, thermal comfort has become a vital necessity. Employee productivity is directly linked to his workplace environment.

Enclosures which operate without any cooling systems are totally dependent on Insulation coupled with adequate ventilation for achieving thermal comfort.

In spaces which are air-conditioned to face summer conditions, high heat ingress greatly increases the load required on the HVAC equipment to remove the above ingress of heat - which means:-

- High energy cost for running the HVAC system and
- Higher running time and, hence wear and tear of the HVAC equipment
- Insufficiently or poorly insulated building would also mean necessity to install HVAC equipment of much higher capacity than what would be adequate if proper thermal insulation had been provided. This would mean higher first cost of the project itself.

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In other parts of the year, insulation duty would also include extreme winter ambient conditions and the concurrent need for achieving thermal comfort in the building interior by heating.

Under winter conditions, a major hazard is the risk of condensation within the system itself or on the inner surfaces of un-insulated or insufficiently insulated building elements. Detailing the Insulation system design would involve proper placement of Vapour Retarder and very careful attention to potential heat bridges and Cold spots.

Major contributors to energy balance in buildings are the roofs. Roofs are composed of Reinforced Cement Concrete (RCC), sheets of fiber Reinforced Cement sheets or Plain / Coated Metal profiles. Apart from addition of insulation value to such elements, it is necessary to add thermal capacity as well - to be able to dampen the effect of cyclical temperature variations so very common over a typical Indian summer day.

Thermal insulation, by retarding heat flow, delivers the following benefits to a building enclosure:

- Helps maintain temperatures as perceived by the occupant to be within his limits of tolerance.
- Reduces over-all cost of heating or cooling by cutting down energy consumption.
- Reduces capacity of capital equipment to be installed for HVAC duty by cutting heat loss or heat gain to be compensated.
- Keeps the temperature of the inner surfaces of buildings within acceptable limits to reduce possibility of their acting as "Radiators" causing added thermal discomfort in summer and possible condensation in winter.
- Provides fire protection to metal structures.
- Reduces break-in of external noises and absorbs internally generated Noise.

Thermal insulation is specified and applied to fulfill any one or combination of the above functions.

Products enjoy the benefit of acceptance by every leading specifier in the field.

## Pre-Insulated Sandwich Panels

Buildings of all types require external fabrics which are capable of facing external exposure conditions while resisting various loads that are incident on them. External conditions include high or low ambient temperatures, high incidence of solar radiation (including ultraviolet rays), attack by environmental media (some of which can be corrosive) and seasonal exposure to rain, snow or sandstorm situations. Loads incident on external fabrics include wind loads, seismic loads, live loads faced during usage of the building and many collateral loads such as loads due to mechanical equipment and services directly mounted on the building fabric.

Metal faced pre-insulated sandwich panels combine every feature required to meet the above exposure conditions while offering high thermal insulation value extraordinarily high structural strengths to span large distances between supporting structural members.

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Apart from external Walls and roofs, every building would require partitioning of internal spaces. Metal faced sandwich panels provide simple and easy-to-erect solutions for all such applications.

Many special facilities like Cold Stores require high level of thermal and structural integrity coupled with high thermal insulation values to meet specific low temperature conditions.

Many manufacturing facilities (in Pharma, Electronics, Precision machining, Paint shops) demand temperature controlled interiors. Thermally insulated envelopes have become a necessity for all such applications.

ASTONE has a comprehensive range pre-insulated sandwich panels with a variety of outer finishes and insulating cores ranging from high efficiency polyurethane / polyisocyanurate to totally fire-safe Rock Wool insulation.

To meet aggressive conditions, metal facings are pre-painted with a variety of finishes over hot dip galvanized / galvalume steel. Architectural coatings include polyester, poly vinyl di fluoride (PVDF/PVF2) many other options in a wide range of colours.

**CLIENTS:**



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