



# COMPLETE PRE-ENGINEERED BUILDING SOLUTIONS

[www.aishra.in](http://www.aishra.in)

## About Us – Aishra Technofab Engineers

Established in August 2018, Aishra Technofab Engineers has rapidly grown into a trusted name in the field of LGSF and Pre-Engineered Buildings.

We specialize in delivering quality products and turnkey solutions to a wide range of clients, including Government / Semi-Government entities, Indian railways, industries, warehouses, housing societies, fuel filling stations, and private sectors across India.

Our expertise extends beyond design, supply, and installation—we also manufacture high-quality PEB components in strict compliance with industry standards. To achieve this, our facilities are equipped with state-of-the-art machinery, such as :

CNC Plasma Cutting Machines,  
CNC Plate Drilling Machines,  
PTW Beam Welding Machines,  
Robotic Beam Stiffener  
Airless Shot Blasting Machines  
Paint Spray Booth and  
Various other Machines



At Aishra Technofab Engineers, our skilled team and in-house R&D drive innovation in pre-engineered buildings. We design structures that are functional, affordable, and aesthetically modern, while meeting international quality standards. With expertise and dedication, we continue shaping the future of PEBs across India

### End to End Total Project Solution



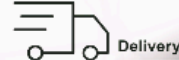
On Site  
Consultation



Design



Manufacturing



Delivery



Project  
Management  
& Completion

## About PEB

PEBs are modern steel structures designed and manufactured in factories, then assembled quickly on-site.

Fast Construction – Saves time compared to traditional methods.

Cost-Efficient – Optimized material use and reduced labor.

Durable & Strong – Engineered for long life and reliability.

Flexible – Easy to expand or modify.

Eco-Friendly – Less waste, more sustainability.



## Vision

Aishra Technofab envisions becoming a globally trusted name in engineering and fabrication, recognized for innovation, precision, and sustainability. Our vision is to set new benchmarks in quality and reliability, ensuring that every structure we create becomes a foundation for progress and success.

## Mission

Aishra Technofab PEB's mission is to:  
Deliver world-class products and services that exceed customer expectations.  
Harness advanced technology and skilled expertise to provide cost-effective and timely solutions.  
Drive continuous innovation and research to establish new industry standards.  
Promote sustainable practices that respect the environment and society.  
Build long-term, trustworthy relationships with customers, employees, and partners.

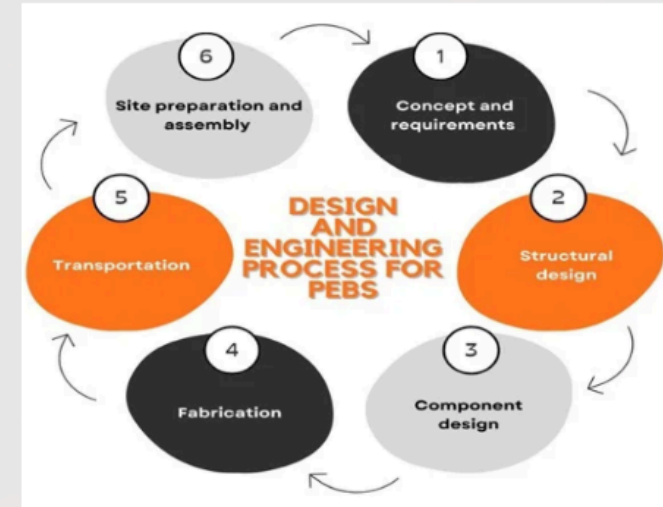
## Values

Integrity – Honest and transparent in all actions.  
Customer First – Delivering beyond expectations.  
Quality – Excellence in every product and service.  
Innovation – Embracing new ideas and technology.  
Teamwork – Collaboration for collective success.  
Respect – Inclusive and dignified workplace.  
Sustainability – Responsible growth for society and environment.  
People Power – Employees are our greatest strength.

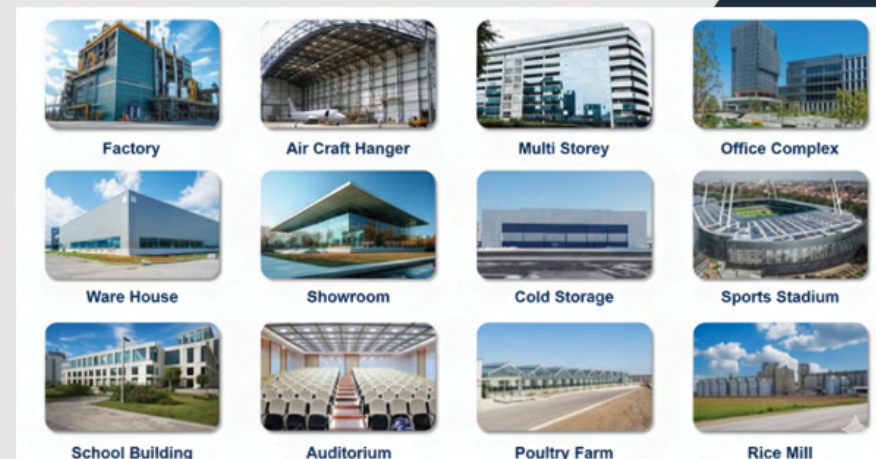
# Advantages of PEB System over CSB

Pre Engineered Building		Conventional Building
Usually lower	<b>Construction Time</b>	Typically higher
Economical Steel usage	<b>Material Cost</b>	Material Variety leads to fluctuating costs
Usually Lower	<b>Labour Cost</b>	Typically higher
Simple design - easy to construct	<b>Foundation</b>	Extensive - heavy foundation required
30% lighter on an average	<b>Structure Weight</b>	Made up of heavy building components
Future expansion is easy and simple	<b>Structure Flexibility</b>	Future expansion is tedious and costly
Lower maintenance cost	<b>Long-Term Maintenance</b>	Varies based on materials
Higher resistance to Seismic forces	<b>Seismic resistance</b>	Doesn't perform well in Seismic Zones

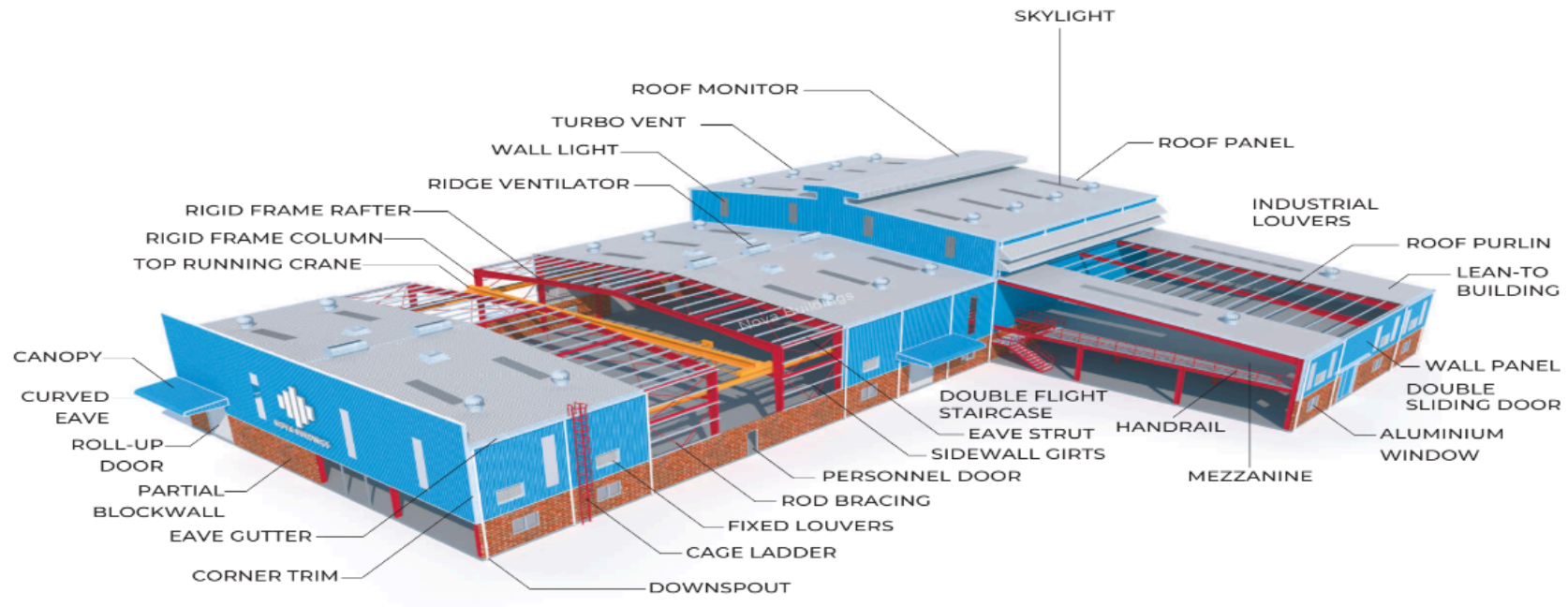
# Design process for PEB



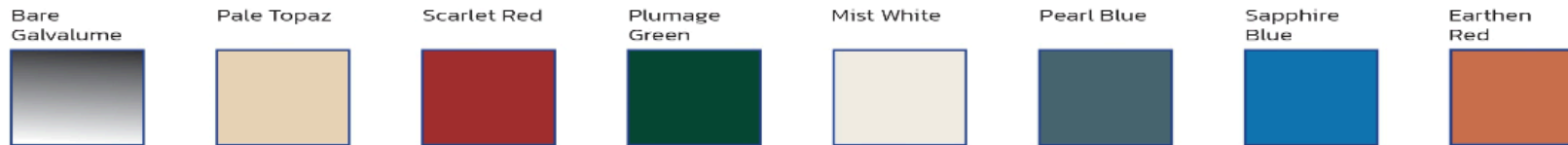
# Applications of PEB



# Pre Engineering Building



## THE PALETTE



## DESIGN LOADS

### DEAD LOADS

The permanent weight of the structure and all its fixed components, including structural framing, purlins, girts, cladding, bracing systems, and connections.

### LIVE LOADS

The permanent weight of the structure and all its fixed components, including structural framing, purlins, girts, cladding, bracing systems, and connections.

### WIND LOADS

Forces exerted by wind pressure on the exterior surfaces of a building. These loads vary depending on the wind zone and the geometry and height of the structure.

### SEISMIC LOADS

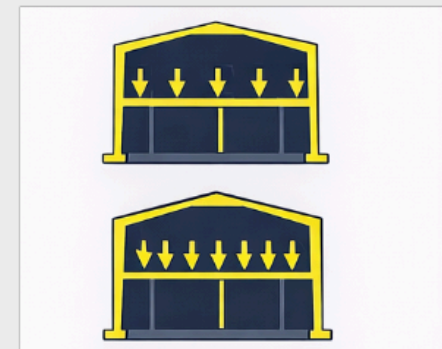
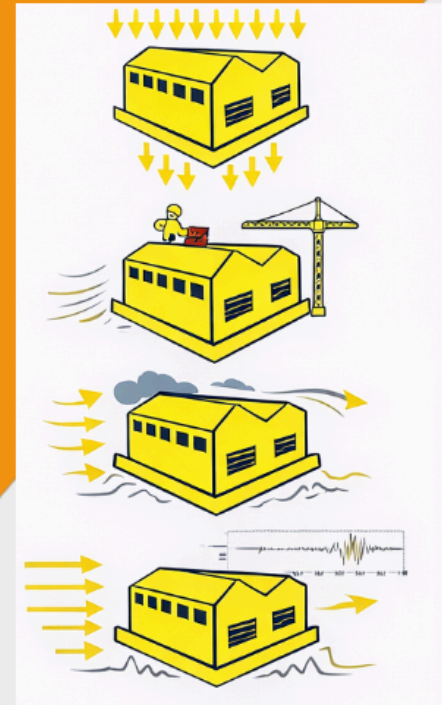
Horizontal forces generated by earthquake activity, typically applied at the building's center of mass and affecting the structural system.

### CRANE LOADS

Loads produced by crane operations, including vertical lifting forces and associated lateral and longitudinal impact effects, as specified by design standards.

### MEZZANINE LOADS

Loads acting on mezzanine floors, including the self-weight of framing and finishes, along with imposed live loads based on occupancy and usage requirements.



## AISHRA COMPONENTS: Redefining Structural Excellence

At Aishra Components, we leverage a world-class, integrated manufacturing ecosystem to produce structural steel that sets new benchmarks for strength, precision, and durability. By combining robotic automation with high-definition CNC technology, we deliver components engineered for the most demanding industrial applications.

### Our Unique Selling Points (USPs)

#### Extreme Scale & Versatility

We specialize in "Super-Size" structural members that most standard facilities cannot handle.

**Massive Beam Footprint:** Manufacturing capability for built-up beams with a maximum width of 1500 mm and web heights up to 1420 mm.

**Heavy-Wall Specialization:** Processing of extreme plate thicknesses, featuring webs up to 25 mm and flanges up to 40 mm.

**Architectural Flexibility:** Ability to manufacture tapered frames with a Web Taper Angle up to 15° and single-piece spans up to 13.0 Meters.

#### CNC Precision-Drilled Plates & Flanges

Our manufactured plates are designed for high-stress connections where manual drilling simply cannot compete.

**Extreme Thickness Capacity:** We manufacture drilled plates with a thickness of up to 100 mm, suitable for heavy-duty base plates and bridge connections.

**High-Speed Accuracy:** Using a 1440 RPM spindle, we provide clean, burr-free holes that ensure 100% bolt alignment on-site.

**Versatile Sizing:** Our facility can handle plates with a drilling width of 1.5 M and lengths up to 3.0 M.

**Heavy-Duty Fastening:** We offer drill sizes up to BT 40 (optional 50 mm) to accommodate large-diameter structural bolts.



BEAM WELDING MACHINE



CNC DRILLING MACHINE

## High-Definition CNC Plasma & Oxyfuel Cutting

We manufacture custom-profiled steel shapes with high edge quality, reducing the need for secondary grinding.

**Dual-Process Cutting:** We utilize both Oxyfuel and Plasma stations to cut a variety of steel grades and thicknesses.

**Massive Profile Range:** Our CNC system supports effective cutting widths of 3.0 Meters and lengths up to 24.6 Meters, ideal for long-span girder webs.

**Dross-Free Finish:** The Hypertherm MAXPRO 200 system provides virtually dross-free cutting on mild steel up to 20 mm and a production pierce capacity of 32 mm.

**Complex Geometry:** From intricate stiffeners to large-scale gusset plates, our 6-nos strip cutting torches allow for high-volume, identical part production. engineered for the most demanding industrial applications.

## Web Splice Welded Products

For extra-long or deep structural members, we manufacture spliced webs that maintain the strength of a single continuous plate.

**Web Width Precision:** Our splicing process handles web widths from 200 mm to 1500 mm.

**Thickness Versatility:** We can splice plates ranging from 4.00 mm to 25.00 mm thick while maintaining strict flatness tolerances.

**Full Penetration Welds:** Using automated splicing technology, we ensure that the joint is as strong as the parent metal, essential for long-span PEB (Pre-Engineered Building) frames.



**CNC PLASMA MACHINE**



**WEB SPLICE WELDER**

## Robotic Welding & Structural Integrity

We replace manual inconsistency with robotic reliability to ensure the highest safety standards.

**Automated Workflow:** From Pull-Through Welding to Robotic Stiffener Welding, our components benefit from deep-penetration, uniform welds that exceed international structural codes.

**Precision Fit-Up:** Our Tack Welding and specialized Web-to-Flange assembly machines guarantee that even the heaviest girders maintain perfect geometry.

## World-Class Surface Protection

We provide factory-applied finishes that guard against corrosion for decades, even in harsh environments.

**SA 2.5 Standard Cleaning:** Every component undergoes centrifugal shot blasting to an SA 2.5 cleaning standard, removing all rust and mill scale for maximum coating adhesion.

**Premium Coating System:** We apply a high-performance Epoxy Primer + PU Paint finish within a controlled environment, ensuring a long-lasting, aesthetic, and corrosion-resistant surface.

**Dust-Free Application:** Our Side Draft Paint Spray Booth (30,000 CFM airflow) ensures a contaminant-free finish, essential for industrial and coastal applications.igh-gloss, ultra-durable shield.

## Rapid Project Turnaround

**High-Speed Processing:** With CNC Oxyfuel and 6-torch strip cutting capabilities, we can process large volumes of plate steel rapidly without compromising accuracy.

**Integrated Workflow:** By housing cutting, drilling, welding, blasting, and painting under one roof, we eliminate logistics delays and provide a true single-source solution.

Feature,Manufacturing Limit

Max Beam Width / Web Height,1500 mm / 1420 mm

Max Plate/Flange Thickness,100 mm (Drilling) / 40 mm (Beams)

Max Component Length,24.6 Meters (CNC Cutting)

Surface Finish Standard,SA 2.5 Shot Blasted + PU Painted



ROBOTIC STIFFNER MACHINE



SHOTBLASTING MACHINE



PAINT SPRAY BOOTH

## Our Products



## Structural System

Structural systems are the main load-bearing and support components of pre-engineered buildings. They include elements like columns, end wall posts, and rafters. Their shape and size depend on the building's application and requirements.

Some most common framing systems are shown below:



## Secondary Member

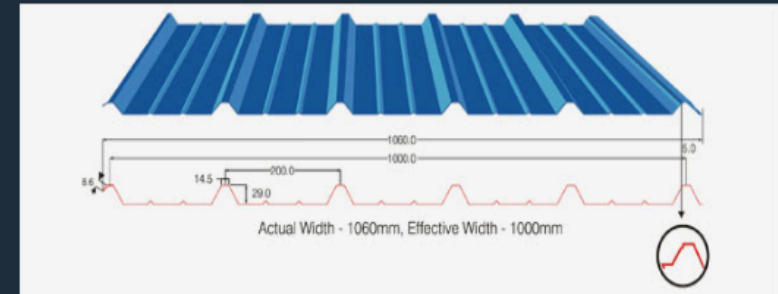
Secondary framing in steel structures includes components such as purlins, girts, eave struts, wind bracing, flange bracing, base angles, clips, and other miscellaneous members.

Purlins, girts, and eave struts are manufactured from cold-formed steel sections.

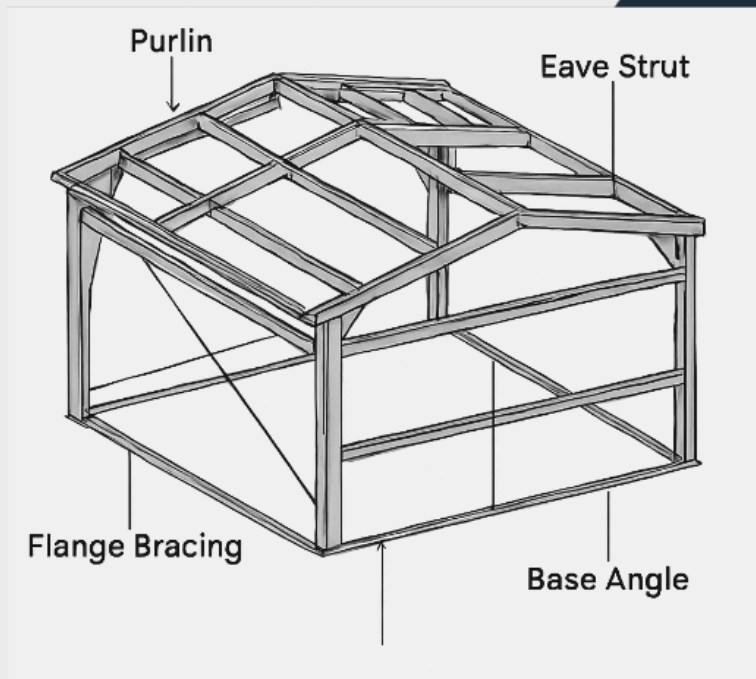
These members are designed with a minimum yield strength of 345 MPa (50,000 psi).

They comply with the material requirements specified in ASTM A1011 Grade 50 or ASTM A653 Grade 50 standards.

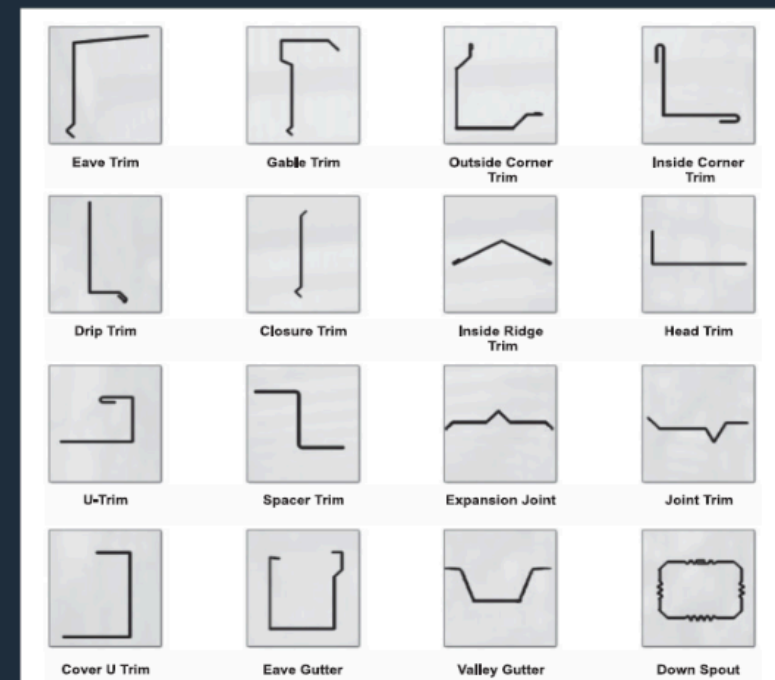
## Roof and Wall Cladding



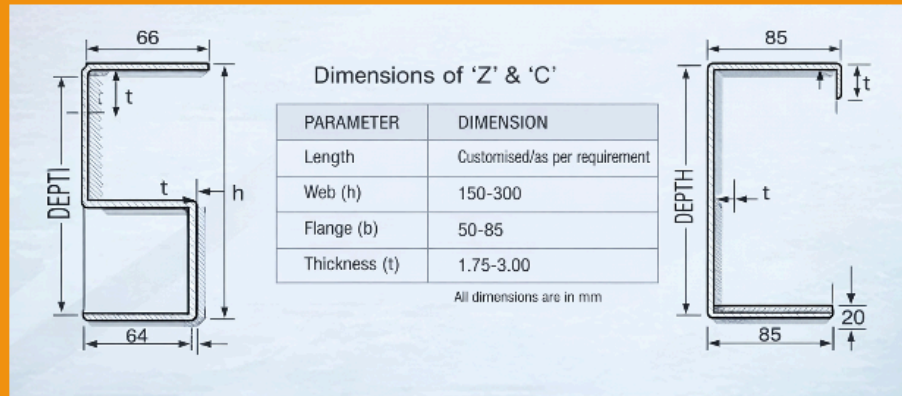
## Secondary Structural Framing



## Standard Flashings & Trims

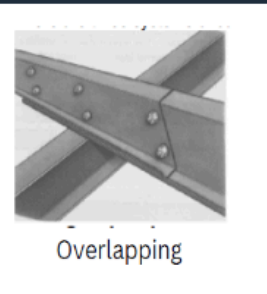


## 'Z' & 'C' Section Purlin

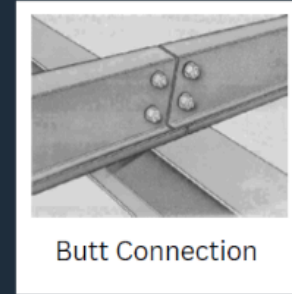


## System of Connection

There are three systems of connections based on design of purlin and its connections :



Overlapping



Butt Connection



Sleeve Connection

## PEB Accessories

**Ventilation:** Turbo Ventilators & Ridge Vents for optimal airflow and heat control.

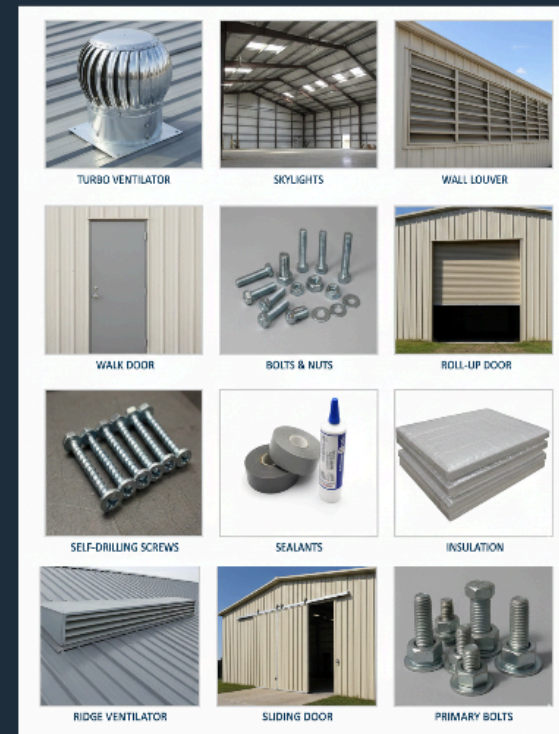
**Access:** Heavy-duty Roll-up Doors, Sliding Doors, and Insulated Walk Doors.

**Natural Light:** High-grade Skylights and Polycarbonate Sheets to reduce energy costs.

**Airflow:** Fixed and Adjustable Wall Louvers for superior indoor air quality.

**Fasteners:** High-tensile Self-Drilling Screws, Bolts, and Nuts for maximum grip.

**Protection:** Industrial Sealants and Thermal Insulation for leak-proof, climate-controlled interiors.





# CONTACT US



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Patna-800013

## Unit Location :

**Aishra Technofab Engineers (PEB Division)**  
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Saraiya, Muazffarpur, Bihar - 843126.

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