



# METAL GROVE

PREFAB BRILLIANCE . . .



## WELCOME TO METAL GROVE

Metal Grove, proudly ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018 certified, brings unmatched expertise in the manufacturing and erection of Pre-Engineered and Prefabricated Buildings. From factories, warehouses, and industrial sheds to staff accommodations, labour hutments, site offices, clean rooms, cold rooms, and solar mounting structures, we handle it all.

### Let's Build Together:

Unlock the potential of your next project with our innovative design, manufacturing, and installation solutions. Contact us today for a complimentary consultation!

# Company Profile

A group of young innovators passionate about Green Building Technology aims to reduce carbon footprint in construction by promoting Prefabricated Building Technology. They emphasize ease of adoption for businesses, ensuring a smooth transition for various purposes such as Industrial Infrastructure, warehouses, factory sheds, workers and staff accommodations, guard cabins, school buildings, Control Pulpits and Solar MCR, ICR. This technology promises both cost and time efficiency, demonstrating a commitment to making the earth a better place to live.

## Our Vision

To lead the industry by providing adaptable, customized solutions for pre-engineered and prefabricated buildings, consistently exceeding customer expectations.

## Our Mission

Metal Grove InnoNex Private Limited offers innovative, customized PEB and prefabricated building solutions. We deliver exceptional value in design, manufacturing, supply and erection using cutting-edge technology and top-quality standards.

## Key Elements to Highlight



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### Vision

- Unparalleled industry leadership.
- Flexibility and customization in solutions.
- Comprehensive services: design, manufacture, supply, and erection.
- Exceeding customer expectations.



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### Mission

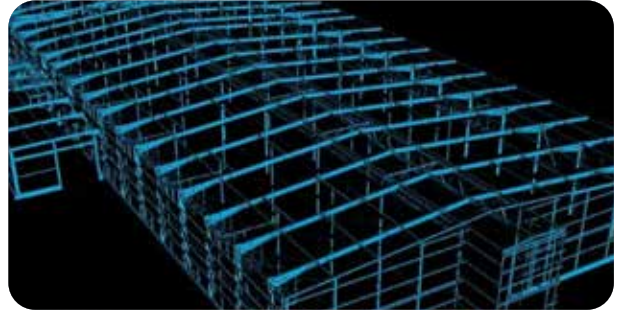
- Commitment to innovation and customization.
- Alignment with customers' unique requirements
- Advanced technology and high-quality standards.
- Exceptional value and unparalleled service.



## Our Process

### Design

Metal Grove ensures the highest level of structural stability in its constructions. From the initial conceptual design to the final fabrication drawing, we offer comprehensive support throughout the entire process.



### Manufacturing

Metal Grove adheres to top-tier manufacturing practices, prioritizing efficient resource utilization, high-quality output, and the integration of cutting-edge technology to ensure excellence in every aspect of our operations.



### Installation

At Metal Grove, we recognize our workers as the backbone of our company. Therefore, we invest in their continuous skill development and thorough training to maintain a highly skilled workforce. We take full responsibility for ensuring timely erection of structures while upholding the highest standards of quality throughout the process.



Metal Grove is your ultimate destination for all PEB and Prefabricated Building projects. With expertise in both areas, we offer comprehensive solutions tailored to your needs, ensuring seamless execution from start to finish. Whether it's a PEB or a Prefabricated Building, you can rely on us as your one-stop source for unmatched quality and efficiency.

For projects of any scale, Metal Grove is your go-to solution. Our prefabricated buildings cater to diverse industries, offering versatility for retail spaces, personal garages, commercial warehouses, offices, and more. Our structures provide durability and reliability, making them the ideal choice for any construction endeavour. Countless clients have benefited from the adaptability and quality of our prefabricated buildings, demonstrating their suitability across various markets. Trust Metal Grove to deliver excellence in every project.

# What We Do

At Metal Grove, we specialize in providing top-notch services in the realm of Pre Engineered Buildings (PEB) and Prefabricated Buildings. Our offerings include:



## Client Consultation

- **Initial Meeting:** Meet with the client to discuss their needs and project scope.
- **Understand Client Requirements:** Gather detailed requirements and preferences.
- **Site Assessment:** Evaluate the construction site to understand the conditions and constraints.



## Design Phase

- **Custom Design Development:** Create a custom design based on client requirements.
- **Structural Engineering:** Perform structural analysis and engineering.
- **CAD/BIM Modelling:** Develop detailed 3D models using CAD/BIM software.
- **Client Approval:** Present the design to the client for approval.



## Planning & Approvals

- **Project Planning:** Develop a detailed project plan and timeline.
- **Obtain Necessary Permits and Approvals:** Secure all required permits and regulatory approvals.



## Fabrication

- **Manufacturing of Components:** Manufacture building components in a controlled factory environment.
- **Quality Control Checks:** Conduct quality control checks to ensure components meet specifications.





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### Logistics

- **Transportation Planning:** Plan the transportation of components to the construction site.
- **Delivery to Site:** Deliver the prefabricated components to the site.



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### Site Preparation

- **Site Clearing and Grading:** Clear and grade the site to prepare for construction.
- **Foundation Construction:** Construct the building's foundation.



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### Construction/Assembly

- **Erection of Primary Frames:** Assemble the main load-bearing structure.
- **Installation of Secondary Frames:** Install purlins, girts, and other secondary frames.
- **Roofing and Wall Panel Installation:** Install roof and wall panels.
- **Integration of Custom Features:** Add custom features like windows, doors, and insulation.



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### Finishing Touches

- **Installation of Accessories:** Install doors, windows, ventilators, and other accessories.
- **Interior and Exterior Finishing:** Complete interior and exterior finishing work.



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### Quality Assurance

- **Final Inspection:** Conduct a thorough inspection to ensure all work meets quality standards.
- **Compliance Checks:** Verify compliance with building codes and client specifications.
- **Client Walkthrough:** Walk through the completed building with the client.



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### Handover

- **Client Handover:** Officially hand over the completed building to the client.
- **Documentation and Warranties:** Provide all necessary documentation and warranties.



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### Post-Construction Support

- **Maintenance Services:** Offer ongoing maintenance services.
- **Client Support:** Provide support for any issues or additional needs

In essence, we offer end-to-end solutions for PEB and Prefabricated Building projects, delivering excellence at every stage of the process

## Our Offerings

### Pre-Engineered Building

Pre Engineered Buildings (PEB) are structures that are engineered and manufactured off-site, then assembled on-site. They are designed to meet specific requirements and are highly customizable to suit various applications and industries. Here's an overview of what PEBs entail



### Prefabricated Buildings

Prefabricated housing offers durability, style, and luxury for various uses such as office buildings, staff accommodations, or small cabins. These buildings are manufactured off-site in a controlled environment, adhering to standard sizes and technical specifications. Once completed, they are shipped to the project location for quick and hassle-free installation, even by non-professionals.



### Insulated Sandwich Panels

Insulated Sandwich Panels are a construction system designed for high efficiency and strength. These panels consist of insulation materials such as expanded polystyrene, PUF (polyurethane foam), Rockwool, or Glasswool, laminated between sheets of structural sheathing.



### Solar Mounting Structure

Solar structures play a crucial role in optimizing the performance and efficiency of solar energy systems. Their ability to support solar panels securely and effectively, combined with their durability and flexibility, makes them an essential component of modern solar installations. With Metal Grove, you can expect high-quality solar structures tailored to your specific needs, ensuring the success and efficiency of your solar energy projects.



# Pre Engineered Buildings

Pre-engineered Buildings (PEBs) are innovative construction solutions where building components are pre-designed and prefabricated in a factory, then assembled on-site. This method provides numerous benefits, including speed, cost-efficiency, and flexibility, making PEBs an ideal choice for various types of structures.

## What are Pre-engineered Buildings

Pre-engineered buildings are designed and fabricated off-site using advanced design and manufacturing techniques. The components are then transported to the construction site for quick and efficient assembly. This approach contrasts with traditional construction methods, where most of the work is done on-site.

## Advantages of Pre-engineered Buildings

- **Cost-Effective:** Reduces material waste and labour costs, making construction more affordable.
- **Time-Efficient:** Prefabrication and rapid on-site assembly significantly reduce construction time.
- **Quality Control:** Factory-controlled environments ensure high-quality standards and consistency.
- **Flexibility:** Easily adaptable to different designs and expandable as needed.
- **Sustainability:** Uses recyclable materials and energy-efficient designs, reducing environmental impact.
- **Durability:** High-quality materials and robust construction ensure long-term performance and resistance to weather conditions.

## Applications

Pre-engineered buildings are versatile and suitable for various applications:

- **Industrial Buildings:** Factories, warehouses, workshops, and manufacturing plants.
- **Commercial Buildings:** Offices, retail spaces, showrooms, and malls.
- **Residential Buildings:** Homes, apartment complexes, and housing developments.
- **Agricultural Buildings:** Barns, storage facilities, and greenhouses.
- **Public Sector Buildings:** Schools, hospitals, community centres, and sports facilities.
- **Infrastructure Projects:** Airports, railway stations, and bus terminals.

Pre-engineered buildings offer a modern, efficient, and sustainable solution for a wide range of construction needs. Their cost-effectiveness, quick construction, and long-term durability make them an ideal choice for various applications, from industrial facilities to residential homes and public infrastructure. With Metal Grove, you can expect high-quality pre-engineered buildings customized to your specific requirements, ensuring the success and efficiency of your construction projects.

# Prefabricated Building

Prefabricated Buildings represent a modern and efficient approach to construction, where building components are manufactured in a factory and then transported to the construction site for assembly. This method offers numerous advantages, including reduced construction time, cost savings, and increased sustainability.

## What are Prefabricated Buildings

Prefabricated buildings, often referred to as prefab buildings, are structures that are assembled from pre-manufactured components. These components are produced in a controlled factory environment and then transported to the construction site for quick assembly. Prefabricated buildings can range from simple modular homes to complex commercial structures.

## Custom Features Advantages of Prefabricated Buildings

Prefabricated buildings can be enhanced with a variety of custom features:

- **Interior and Exterior Finishes:** A wide range of finishes to match aesthetic preferences and functional needs.
- **Energy-Efficient Systems:** Integration of solar panels, insulation, and energy-efficient windows.
- **Smart Technology:** Incorporation of smart home or office technology for automation and control.
- **Accessibility Features:** Escalators, elevators, and other features to ensure accessibility for all users.
- **Sustainable Materials:** Use of eco-friendly materials and sustainable building practices.

## Applications

Prefabricated buildings are versatile and suitable for various applications:

- **Residential:** Homes, apartments, vacation cabins.
- **Commercial:** Offices, retail spaces, showrooms.
- **Educational:** Schools, classrooms, training centres.
- **Healthcare:** Clinics, hospitals, mobile healthcare units.
- **Industrial:** Factories, warehouses, workshops.
- **Public Sector:** Community centres, libraries, recreational facilities.

Temporary Structures: Event spaces, disaster relief shelters, construction site offices.

Prefabricated buildings offer a modern, efficient, and sustainable solution for a wide range of building needs. Their cost-effectiveness, quick construction, and long-term durability make them an ideal choice for various applications, from residential homes to commercial spaces and public facilities. With Metal Grove, you can expect high-quality prefabricated buildings customized to your specific requirements, ensuring the success and efficiency of your projects.



## Insulated Sandwich Panels

Insulated Sandwich Panels are advanced construction materials that consist of a core insulating layer sandwiched between two outer layers, typically made of metal. These panels are widely used in building construction for their excellent thermal insulation, durability, and ease of installation.

### Components of Insulated Sandwich Panels

#### Core Insulating Layer:

- **Materials:** The core can be made of different insulating materials, including:
  - **Polyurethane Foam (PUF):** Offers high thermal resistance and low thermal conductivity.
  - **Polyisocyanurate (PIR):** Similar to PUF but with enhanced fire resistance.
  - **Expanded Polystyrene (EPS):** Cost-effective and provides good thermal insulation.
  - **Mineral Wool (Rockwool/Glasswool):** Excellent fire resistance and sound insulation properties.
- **Function:** The core material provides the main thermal insulation properties, reducing heat transfer and improving energy efficiency.

#### Outer Layers (Facings):

- **Materials:** Typically made of:
  - **Galvanized Steel (PPGI/PPGL):** Offers durability and resistance to corrosion.
  - **Aluminium:** Lightweight and corrosion-resistant.
  - **Stainless Steel:** Provides superior corrosion resistance and strength.
- **Function:** The outer layers protect the core material from mechanical damage, moisture, and environmental factors, while also providing structural support.

### Advantages of Insulated Sandwich Panels

- **Thermal Insulation:** Excellent thermal performance reduces energy consumption for heating and cooling.
- **Fire Resistance:** Certain core materials, like mineral wool, offer high fire resistance, contributing to building safety.
- **Sound Insulation:** Provides good acoustic insulation, reducing noise levels inside buildings.
- **Durability:** Resistant to weather conditions, corrosion, and mechanical impacts.
- **Lightweight:** Easier to handle and install compared to traditional construction materials.
- **Quick Installation:** Prefab nature allows for rapid installation, reducing construction time.
- **Aesthetic Versatility:** Available in various colours, finishes, and textures to meet design requirements.

### Applications

Insulated sandwich panels are versatile and can be used in a wide range of applications:

- **Industrial Buildings:** Factories, warehouses, and production facilities.
- **Commercial Buildings:** Offices, shopping malls, and retail outlets.
- **Residential Buildings:** Homes, apartment complexes, and housing developments.
- **Agricultural Buildings:** Barns, storage facilities, and greenhouses.
- **Cold Storage:** Refrigerated warehouses, cold rooms, and freezer rooms.
- **Clean Rooms:** Laboratories, pharmaceutical manufacturing, and electronics production facilities.

Insulated sandwich panels are a highly effective and versatile solution for modern construction needs. Their excellent thermal and acoustic insulation properties, combined with their durability and ease of installation, make them an ideal choice for a wide range of building applications. With Metal Grove, you can expect high-quality insulated sandwich panels customized to your specific requirements, ensuring the success and efficiency of your construction projects.

## PUF Sandwich Panels

PUF (Polyurethane Foam) panels are a type of sandwich panel used in construction and insulation applications. These panels consist of a rigid core of polyurethane foam sandwiched between two layers of metal or other durable materials. The core material, polyurethane, is known for its excellent thermal insulation properties, structural strength, and lightweight characteristics.



Parameter	Value/Range	Significance
<b>Thermal Conductivity</b>	0.022 to 0.028 W/mK	Better insulation properties with lower values.
<b>Density</b>	40 kg/m <sup>3</sup> ± 2kg	Affects strength and thermal insulation capacity.
<b>Core Thickness</b>	40mm to 200mm	Varies based on application and insulation requirements.
<b>Panel Length</b>	Up to 12 meters (customizable)	Larger panels cover more area, reducing installation time.
<b>Panel Width</b>	Typically 1 to 1.2 meters	Standard width for easy installation.
<b>Compressive Strength</b>	150 to 200 kPa	Indicates ability to withstand compressive loads.
<b>Tensile Strength</b>	350 to 500 kPa	Indicates resistance to tension forces.
<b>Water Absorption</b>	Less than 2% by volume	Ensures effectiveness in humid conditions.
<b>Fire Resistance</b>	B2 or B3 (DIN 4102)	Classification for fire resistance.
<b>Thermal Resistance</b>	Varies with thickness (e.g., R-value for 50mm ≈ 2.27 m <sup>2</sup> K/W)	Higher values indicate better insulation.
<b>Surface Coating/Fascia</b>	PPGI/PPGL/Aluminum/Cement Fiber Board/SS or other protective layers	Enhances durability and environmental resistance.
<b>Operating Temperature</b>	-50°C to +80°C	Range within which the panels can operate effectively.
<b>Vapor Permeability</b>	0.15 to 0.20 ng/Pa.s.m <sup>2</sup>	Low values help prevent moisture buildup.

## Applications

- **Cold Storage:** Excellent thermal insulation for maintaining low temperatures.
- **Industrial Buildings:** Provides structural strength and insulation.
- **Residential Buildings:** Enhances energy efficiency and comfort.
- **Clean Rooms:** Maintains controlled environments with precise insulation needs.
- **Roofing and Cladding:** Lightweight and durable, ideal for various construction needs.

In summary, PUF panels are a versatile, efficient, and cost-effective solution for various construction and insulation needs, offering superior thermal insulation, structural strength, and ease of installation.

## EPS Sandwich Panels

EPS Sandwich Panels are advanced building materials renowned for their excellent thermal insulation, cost-effectiveness, and lightweight properties. These panels consist of a core made from Expanded Polystyrene (EPS) sandwiched between two layers of metal, typically steel or aluminium. EPS is a type of rigid foam insulation made from expanded polystyrene beads, known for its closed-cell structure and outstanding insulating capabilities.



Parameter	Value/Range	Significance
<b>Thermal Conductivity</b>	0.032 to 0.038 W/mK	Lower values indicate better insulation properties.
<b>Density</b>	10 to 30 kg/m <sup>3</sup>	Affects structural strength and thermal insulation.
<b>Thickness</b>	40mm to 200mm	Varies based on application and required insulation.
<b>Panel Length</b>	Up to 12 meters (customizable)	Larger panels cover more area, reducing installation time.
<b>Panel Width</b>	Typically 1 to 1.2 meters	Standard width for easy installation.
<b>Compressive Strength</b>	100 to 200 kPa	Indicates the panel's ability to withstand compressive loads.
<b>Tensile Strength</b>	200 to 750 kPa	Indicates resistance to tension forces.
<b>Water Absorption</b>	Less than 2% by volume	Ensures panels remain effective in humid conditions.
<b>Fire Resistance</b>	B1 to B2 (DIN 4102)	Classification for fire resistance.
<b>Thermal Resistance (R-value)</b>	Varies with thickness (e.g., R-value for 50mm ≈ 1.32 m <sup>2</sup> K/W)	Higher values indicate better insulation.
<b>Surface Coating/Fascia</b>	PPGI/PPGL or other protective layers	Enhances durability and resistance to environmental factors.
<b>Operating Temperature Range</b>	-50°C to +75°C	Indicates the range of temperatures the panels can effectively operate within.
<b>Vapor Permeability</b>	0.5 to 1.0 ng/Pa.s.m <sup>2</sup>	Values help prevent moisture buildup within the panel.

## Applications

- **Cold Storage:** Provides insulation to maintain low temperatures.
- **Industrial Buildings:** Offers structural strength and thermal insulation.
- **Residential Buildings:** Enhances energy efficiency and comfort.
- **Clean Rooms:** Maintains controlled environments with precise insulation needs.
- **Roofing and Cladding:** Lightweight and durable, ideal for various construction needs.

In summary, EPS sandwich panels are versatile and efficient construction materials offering excellent thermal insulation, lightweight characteristics, and cost-effectiveness. They are suitable for a wide range of applications in industrial, commercial, and residential buildings, providing enhanced energy efficiency, structural support, and durability.

## Rockwool Sandwich Panels

Rockwool sandwich panels are advanced building materials used for their superior insulation, fire resistance, and acoustic properties. These panels consist of a core made from mineral wool (rockwool) sandwiched between two layers of metal, typically steel or aluminium. The core material, rockwool, is derived from volcanic rock and is known for its excellent thermal insulation, fire resistance, and sound absorption capabilities.



Parameter	Value/Range	Significance
<b>Thermal Conductivity</b>	0.034 to 0.040 W/mK	Lower values indicate better insulation properties.
<b>Density</b>	80 to 120 kg/m <sup>3</sup>	Affects structural strength and thermal insulation.
<b>Thickness</b>	50mm to 200mm	Varies based on application and required insulation.
<b>Panel Length</b>	Up to 12 meters (customizable)	Larger panels cover more area, reducing installation time.
<b>Panel Width</b>	Typically 1 to 1.2 meters	Standard width for easy installation.
<b>Compressive Strength</b>	40 to 100 kPa	Indicates the panel's ability to withstand compressive loads.
<b>Tensile Strength</b>	150 to 200 kPa	Indicates resistance to tension forces.
<b>Water Absorption</b>	Less than 1% by volume	Ensures panels remain effective in humid conditions.
<b>Fire Resistance</b>	A1 (Non-combustible)	Excellent fire resistance, crucial for safety.
<b>Thermal Resistance (R-value)</b>	Varies with thickness (e.g., R-value for 100mm ≈ 2.94 m <sup>2</sup> K/W)	Higher values indicate better insulation.
<b>Surface Coating/Fascia</b>	PPGI/PPGL or other protective layers	Enhances durability and resistance to environmental factors.
<b>Operating Temperature Range</b>	-50°C to +250°C	Indicates the range of temperatures the panels can effectively operate within.
<b>Sound Insulation</b>	30 to 60 dB	Provides excellent acoustic insulation.

## Applications

- **Fireproofing:** Excellent fire resistance for high-risk areas.
- **Industrial Buildings:** Provides structural strength and thermal insulation.
- **Acoustic Insulation:** Ideal for applications requiring soundproofing.
- **Residential Buildings:** Enhances energy efficiency and comfort.
- **Roofing and Cladding:** Lightweight and durable, ideal for various construction needs.

In summary, rockwool sandwich panels are a versatile and robust solution for construction needs, offering superior fire resistance, thermal and acoustic insulation, and durability. These panels are ideal for a wide range of applications in industrial, commercial, and residential buildings, providing enhanced safety, comfort, and energy efficiency.

## Glasswool Sandwich Panels

Glasswool sandwich panels are high-performance building materials known for their excellent thermal insulation, sound absorption, and fire resistance properties. These panels consist of a core made from glass wool, which is sandwiched between two layers of metal, typically steel or aluminium. Glass wool, also known as fiberglass insulation, is made from recycled glass and sand, and it is renowned for its fibrous texture and insulating capabilities.



Parameter	Value/Range	Significance
<b>Thermal Conductivity</b>	0.030 to 0.040 W/mK	Lower values indicate better insulation properties.
<b>Density</b>	40 to 80 kg/m <sup>3</sup>	Affects structural strength and thermal insulation.
<b>Thickness</b>	50mm to 150mm	Varies based on application and required insulation.
<b>Panel Length</b>	Up to 2.4 meters (customizable)	Typically used in shorter lengths due to flexibility.
<b>Panel Width</b>	Typically 1 to 1.2 meters	Standard width for easy installation.
<b>Compressive Strength</b>	5 to 25 kPa	Indicates the panel's ability to withstand compressive loads.
<b>Tensile Strength</b>	10 to 20 kPa	Indicates resistance to tension forces.
<b>Water Absorption</b>	Less than 1% by volume	Ensures panels remain effective in humid conditions.
<b>Fire Resistance</b>	A1 (Non-combustible)	Excellent fire resistance, crucial for safety.
<b>Thermal Resistance (R-value)</b>	Varies with thickness (e.g., R-value for 100mm ≈ 3.0 m <sup>2</sup> K/W)	Higher values indicate better insulation.
<b>Surface Coating/Fascia</b>	PPGI/PPGL or other protective layers	Enhances durability and moisture resistance.
<b>Operating Temperature Range</b>	-50°C to +250°C	Indicates the range of temperatures the panels can effectively operate within.
<b>Sound Insulation</b>	25 to 60 dB	Provides excellent acoustic insulation.

## Applications

- **Thermal Insulation:** Excellent for maintaining temperature control in buildings.
- **Soundproofing:** Provides acoustic insulation for quieter environments.
- **Fireproofing:** Non-combustible properties make it suitable for fire-resistant applications.
- **Industrial Buildings:** Ideal for providing both thermal and acoustic insulation.
- **Residential Buildings:** Enhances energy efficiency and comfort.
- **Duct Insulation:** Often used for HVAC systems due to its thermal and acoustic properties.

In summary, glasswool sandwich panels are versatile and effective solutions for various construction and insulation needs. They offer superior thermal insulation, sound absorption, and fire resistance, making them ideal for a wide range of applications in industrial, commercial, and residential buildings. Their lightweight nature and durability further enhance their appeal as a high-performance building material.



## Solar Mounting Structures

Solar Structures are essential components in solar energy systems, designed to support and optimize the installation of solar panels. These structures are engineered to ensure that solar panels are mounted securely and at the optimal angle for maximum energy efficiency.

### Materials and Construction

Materials used in solar structures are selected for their strength, durability, and weather resistance:

- **Steel:** Commonly used for its high strength and durability, especially in ground-mount and pole-mount systems.
- **Aluminum:** Lightweight and corrosion-resistant, often used in roof-mount systems.
- **Concrete:** Used in foundations and bases for ground-mount and pole-mount systems.
- **Composite Materials:** Used in some advanced designs for enhanced performance and aesthetics.

### Advantages of Solar Structures

- **Optimal Panel Positioning:** Ensures that solar panels are positioned at the optimal angle for maximum sunlight exposure and energy efficiency.
- **Durability:** Designed to withstand harsh weather conditions and environmental factors, ensuring long-term performance.
- **Flexibility:** Various mounting options allow for installation on different types of surfaces and terrains.
- **Aesthetics:** Modern designs can blend with building architecture, minimizing visual impact.
- **Cost-Effectiveness:** Reduces installation costs and increases the efficiency of solar energy systems.

### Applications

Solar structures are versatile and can be used in various settings, including:

- **Residential:** Roof-mount systems, ground-mount systems, and canopy systems for homes.
- **Commercial:** Roof-mount and canopy systems for office buildings, warehouses, and retail spaces.
- **Industrial:** Large-scale ground-mount systems and canopy systems for factories and industrial sites.
- **Public Sector:** Solar canopies for parking lots, schools, and municipal buildings.

Solar structures play a crucial role in optimizing the performance and efficiency of solar energy systems. Their ability to support solar panels securely and effectively, combined with their durability and flexibility, makes them an essential component of modern solar installations. With Metal Grove, you can expect high-quality solar structures tailored to your specific needs, ensuring the success and efficiency of your solar energy projects.

# Product Gallery

## FACTORY BUILDINGS



## INDUSTRIAL BUILDINGS



## WAREHOUSE BUILDING



## PREFABRICATED STRUCTURE



**PORTA CABIN**



**SECURITY GUARD CABIN**



**LIFTABLE PORTA CABIN**



**PREFAB SITE INFRASTRUCTURE**



**STAFF ACCOMMODATION**



**WORKERS ACCOMMODATION**



**COLD STORAGE**



**CLEAN ROOM**



**OPERATION THEATRE ROOM**



**INDUSTRIAL ENCLOSURE**



**CONTROL PULPIT**

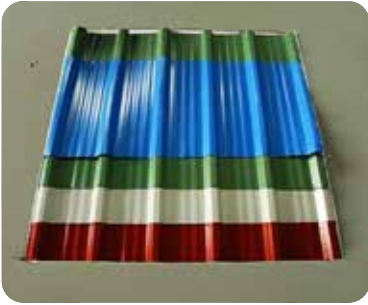


**ACOUSTIC ENCLOSURE**

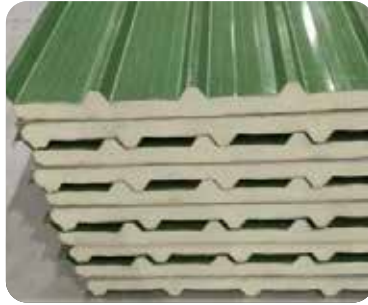




PPGI/PPGL CLADDING SHEETS



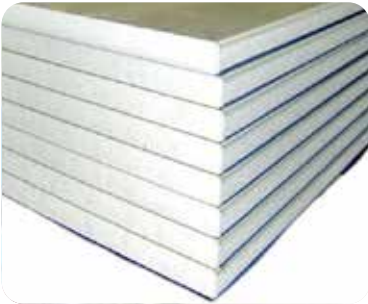
PUF ROOF PANELS



PUF WALL PANELS



EPS PANELS



ROCKWOOL PANELS



GLASSWOOL PANELS



LABOUR/WORKERS COLONY



PREFAB FARM HOUSE



PREFAB COTTAGES



MEZZANINE FLOOR STRUCTURE



AIRCRAFT HANGARS



SOLAR STRUCTURE



# Why Prefabricated Buildings

Prefabricated buildings offer numerous advantages over traditional construction methods, making them an increasingly popular choice for various types of structures. Here are some key reasons why prefabricated buildings are beneficial:



## 1 Time Efficiency

- **Reduced Construction Time**

Prefabricated buildings are manufactured in controlled factory environments while site preparation occurs simultaneously. This parallel work significantly reduces the overall construction time.

- **Consistency**

The use of standardized processes and automation ensures uniform quality across all components.



## 2 Cost Savings

- **Lower Labor Costs**

Prefabrication requires fewer labor hours on-site, reducing labor costs.

- **Minimized Waste**

Precision manufacturing processes result in less material waste, translating to cost savings on materials.



## 3 Quality Control

- **Controlled Environment**

Building components are produced in factory settings with stringent quality control measures, ensuring high standards of construction.

- **Consistency**

The use of standardized processes and automation ensures uniform quality across all components.



## 4 Sustainability

- **Reduced Environmental Impact**

Prefabrication generates less waste and often utilizes eco-friendly materials and methods, contributing to environmental sustainability.

- **Energy Efficiency**

Many prefabricated buildings are designed with energy-efficient features, reducing long-term operational energy consumption.



## 5 Design Flexibility

- **Customization**

Modern prefabricated buildings offer a wide range of design options, allowing for customization to meet specific needs and preferences.

- **Scalability**

Prefabricated structures can be easily expanded or modified, offering flexibility for future growth or changes.





## 6 Safety

- **Enhanced Worker Safety**  
Factory-based construction reduces the risks associated with on-site construction, such as falls and exposure to hazardous conditions.
- **Improved Site Safety**  
Shorter on-site construction periods reduce the potential for accidents and disturbances at the building site.



## 7 Durability and Quality

- **High-Quality Materials**  
Prefabricated buildings are often made with durable materials that meet or exceed traditional construction standards.
- **Precision Engineering**  
The use of advanced manufacturing technologies ensures precise and reliable construction.



## 8 Reduced Disruption

- **Less On-Site Activity**  
With most of the construction happening off-site, there is less noise, dust, and disruption to the surrounding area during the building process.



## 9 Versatility

- **Wide Range of Applications**  
Prefabricated buildings are suitable for a variety of applications, including residential, commercial, industrial, and institutional uses.
- **Adaptability**  
They can be used in different environments and conditions, from urban areas to remote locations.



## 10 Regulatory Compliance

- **Ease of Approval**  
Prefabricated buildings often meet or exceed local building codes and regulations, facilitating smoother approval processes.
- **Consistency with Standards**  
Factory-based production ensures compliance with safety and quality standards.

# Conclusion

Prefabricated buildings offer a compelling combination of efficiency, cost-effectiveness, quality, sustainability, and flexibility. These advantages make them a viable and attractive alternative to traditional construction methods, meeting the needs of diverse projects and stakeholders.



**METAL GROVE**  
PREFAB BRILLIANCE . . . .



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