



PRE-ENGINEERED BUILDINGS (PEB)

ENGINEERED FOR STRENGTH. BUILT FOR THE FUTURE.



DESIGN



MANUFACTURING



SUPPLY



INSTALLATION



AFTER-SALES
SUPPORT



HIGH STRENGTH
STRUCTURES



PRECISION
ENGINEERING



TIMELY
DELIVERY



COST
EFFECTIVE



SUSTAINABLE
SOLUTIONS

Build Strong. Build Smart.

About KMS Technologies

Building the Future with Precision Steel Engineering

KMS Technologies is a leading [Pre-Engineered Building \(PEB\)](#) manufacturer and turnkey steel structure solutions provider based in Greater Noida, Uttar Pradesh. We specialize in the design, engineering, manufacturing, supply, and installation of high-quality steel buildings tailored to meet the diverse requirements of industrial, commercial, infrastructure, and institutional projects.

Since our establishment in **2020**, we have been committed to delivering innovative, durable, and cost-effective building solutions that combine advanced engineering with superior craftsmanship. Our experienced team works closely with clients to understand their project requirements and deliver customized solutions that meet the highest standards of quality, safety, and efficiency.

Whether it's a warehouse, factory, aircraft hangar, logistics hub, cold storage facility, commercial building, or industrial shed, KMS Technologies provides complete end-to-end PEB solutions—from concept and structural design to manufacturing, erection, and project completion.

Our Vision

To become one of India's most trusted and innovative leaders in Pre-Engineered Building solutions by delivering sustainable, high-performance steel structures that support industrial growth and infrastructure development.

Our Mission

- Deliver world-class Pre-Engineered Building solutions with uncompromising quality.
- Complete every project safely, efficiently, and within the agreed timeline.

- Build long-term relationships through transparency, reliability, and exceptional customer service.
 - Continuously adopt modern engineering practices, advanced technology, and sustainable construction methods.
 - Create lasting value for our clients through customized and cost-effective steel building solutions.
-

ISO 9001:2015 Certified

[KMS Technologies](#) follows a quality management system that reflects our commitment to delivering consistent products and services. Our **ISO 9001:2015 certification** demonstrates our focus on quality assurance, continuous improvement, customer satisfaction, and standardized operational processes throughout every stage of project execution.

Years of Experience

Established in 2020, KMS Technologies has successfully delivered and supported a wide range of Pre-Engineered Building projects across multiple industries. With a growing portfolio and a dedicated team of engineers, designers, and installation professionals, we continue to provide dependable steel construction solutions that meet modern infrastructure demands.

Why Choose KMS Technologies?

- ✓ Complete Design, Manufacturing, Supply & Installation Services
 - ✓ Customized Pre-Engineered Building Solutions
 - ✓ Experienced Structural Engineering Team
 - ✓ Premium Quality Steel and Certified Manufacturing Standards
-

- ✓ Timely Project Execution with a Strong Focus on Safety
 - ✓ Cost-Effective and Sustainable Construction Solutions
 - ✓ Strict Quality Control at Every Stage
 - ✓ Dedicated After-Sales Support and Technical Assistance
 - ✓ Transparent Communication and Customer-Centric Approach
 - ✓ Trusted Partner for Industrial, Commercial, and Infrastructure Projects
-

KMS Technologies

Build Strong. Build Smart.

Table of Contents

About This eBook 02

Table of Contents 03

Chapter 1 – Introduction to Pre-Engineered Buildings (PEB) 04

- What is a Pre-Engineered Building?
- Evolution of PEB Construction
- Benefits of PEB Systems
- Applications Across Industries

Chapter 2 – Why Choose PEB Over Conventional Construction? 08

- PEB vs Conventional Buildings
- Cost Comparison
- Construction Speed
- Structural Performance
- Sustainability Benefits

Chapter 3 – Components of a Pre-Engineered Building 12

- Primary Framing
- Secondary Framing
- Roof & Wall Panels
- Bracing Systems
- Accessories & Insulation

Chapter 4 – Types of PEB Structures 18

- Industrial Sheds

- Warehouses
- Factories
- Aircraft Hangars
- Commercial Buildings
- Cold Storage Facilities
- Logistics Centers
- Sports Complexes
- Agricultural Buildings

Chapter 5 – Design & Engineering Process 24

- Requirement Analysis
- Structural Design
- Engineering Software
- Fabrication Drawings
- Quality Planning

Chapter 6 – Manufacturing Process 30

- Steel Procurement
- Cutting & Fabrication
- Welding
- Surface Preparation
- Painting & Coating
- Quality Inspection
- Packaging & Dispatch

Chapter 7 – Installation & Project Execution 36

- Foundation Preparation
- Structural Erection
- Roofing & Cladding
- Finishing Works
- Final Inspection

Chapter 8 – Roofing, Cladding & Insulation Systems 42

- Roofing Solutions
- Wall Cladding
- PUF Panels
- Sandwich Panels
- Ventilation & Daylighting

Chapter 9 – Quality Standards & Safety Practices 48

- Quality Assurance
- ISO 9001:2015
- Indian Standards (IS Codes)
- Workplace Safety
- Site Management

Chapter 10 – Industries We Serve 54

- Manufacturing
- Warehousing
- Logistics
- Aviation
- Agriculture

- Food Processing
- Pharmaceutical
- Infrastructure
- Commercial Projects

Chapter 11 – Featured Projects & Case Studies 60

- Project Highlights
- Client Success Stories
- Aircraft Hangar Project
- Industrial & Warehouse Projects

Chapter 12 – Frequently Asked Questions (FAQs) 66

- Common Questions About PEB
- Design & Construction
- Cost & Maintenance
- Expansion & Customization

Chapter 13 – Why KMS Technologies? 72

- Our Strengths
- Competitive Advantages
- Project Delivery Process
- Customer Support

Chapter 14 – Contact Us 76

- Company Information
- Services
- Contact Details

- Website & Social Media

Bonus Resources

- PEB Planning Checklist
- Building Cost Factors
- Steel Building Maintenance Guide
- Technical Glossary
- PEB Terminology
- Quick Reference Charts

Introduction to Pre-Engineered Buildings (PEB)



The Future of Construction

Pre-Engineered Buildings (PEB) are modern steel structures designed, manufactured, and erected efficiently, offering strength, speed, cost-effectiveness, and sustainability for a wide range of industries.



STRONG
High strength
steel structures



FAST
Rapid construction
and installation



COST EFFECTIVE
Lower overall cost
and maintenance



SUSTAINABLE
Eco-friendly and
energy efficient



VERSATILE
Suitable for multiple
industries and uses



Greater Noida, Uttar Pradesh, India



www.kmstechnologies.co.in



info@kmstechnologies.co.in



+91 9311719666



Scan to visit
our website

*Build Strong.
Build Smart.*



Introduction to Pre-Engineered Buildings (PEB)

Building the Future with Smart Steel Construction

Pre-Engineered Buildings (PEBs) have transformed the construction industry by offering faster, stronger, and more economical alternatives to conventional building methods. Designed using advanced engineering principles and manufactured in a controlled factory environment, PEBs provide exceptional structural performance while reducing construction time, material waste, and overall project costs.

Today, Pre-Engineered Buildings are widely used across industrial, commercial, logistics, aviation, agricultural, and infrastructure sectors due to their flexibility, durability, and ability to accommodate a wide range of design requirements.

What is a Pre-Engineered Building (PEB)?

A [Pre-Engineered Building \(PEB\)](#) is a steel structure that is designed, engineered, fabricated, and manufactured off-site before being transported to the construction site for assembly. Each component is precision-engineered to fit

together seamlessly, ensuring faster installation, consistent quality, and efficient project execution.

Unlike conventional RCC buildings, where most construction activities take place on-site, PEB components are manufactured under controlled factory conditions. This process minimizes material wastage, improves quality control, and significantly reduces construction time.

Key Features of a PEB

- Factory-engineered structural components for precision and quality.
- Faster project completion compared to conventional construction.

- Lightweight yet highly durable steel structures.
 - Flexible and customizable layouts to meet project-specific needs.
 - Easy future expansion and modifications.
 - Lower maintenance requirements and lifecycle costs.
 - Sustainable construction with recyclable steel and reduced material waste.
 - Suitable for long clear spans without intermediate columns.
-

History of Pre-Engineered Buildings

The concept of steel building systems dates back to the early 20th century, when prefabricated steel structures began to be used for industrial and military applications. As manufacturing technologies advanced, engineers developed optimized structural systems that reduced steel consumption while maintaining high strength and durability.

In the post-World War II era, the demand for rapid infrastructure development accelerated the adoption of pre-engineered steel buildings. By the 1960s and 1970s, PEB systems became widely accepted across North America and Europe for warehouses, factories, and commercial facilities.

Over the following decades, improvements in structural design software, manufacturing automation, and corrosion protection technologies further enhanced the performance and versatility of PEB systems. Today, they are recognized as one of the most efficient construction methods worldwide.

Evolution of PEB Technology

Modern Pre-Engineered Buildings have evolved significantly from simple steel sheds into highly engineered, customized structures capable of supporting complex industrial and commercial applications.

Key Milestones in the Evolution of PEB

- **Early Prefabrication:** Basic steel structures designed for industrial and military use.
- **Optimized Structural Design:** Development of tapered steel sections to improve material efficiency.
- **Computer-Aided Engineering:** Adoption of advanced structural analysis and 3D modeling software for precise design.
- **Automated Manufacturing:** CNC cutting, robotic welding, and automated fabrication improved quality and consistency.
- **Energy-Efficient Solutions:** Integration of insulated roof and wall panels, daylighting systems, and ventilation technologies.
- **Sustainable Construction:** Greater emphasis on recyclable materials, reduced carbon footprint, and environmentally responsible building practices.

Today, PEBs are used for everything from manufacturing plants and logistics centers to aircraft hangars, sports arenas, and commercial complexes.

Global Market Overview

The global demand for Pre-Engineered Buildings has grown steadily over the past decade, driven by rapid industrialization, urban development, and the need for faster and more cost-effective construction solutions.

Key factors contributing to this growth include:

- Expansion of manufacturing and industrial sectors.
- Rising investments in warehousing and logistics infrastructure.
- Growth of e-commerce requiring modern distribution centers.
- Increased adoption of sustainable and energy-efficient construction.
- Demand for faster project delivery with lower lifecycle costs.

- Continuous advancements in steel fabrication and engineering technologies.

Countries across North America, Europe, the Middle East, and Asia-Pacific continue to invest in PEB solutions for industrial, commercial, institutional, and infrastructure projects, making steel construction a preferred choice worldwide.

Indian Market Overview

India has emerged as one of the fastest-growing markets for Pre-Engineered Buildings. Rapid industrial expansion, infrastructure development, and government initiatives such as **Make in India**, industrial corridors, logistics parks, and smart city projects have significantly increased the demand for modern steel construction.

Industries driving the adoption of PEBs in India include:

- Manufacturing
- Warehousing & Logistics
- E-commerce Distribution Centers
- Automotive
- Food Processing
- Pharmaceuticals
- Aviation Infrastructure
- Cold Storage Facilities
- Agriculture
- Renewable Energy
- Commercial Buildings

PEBs are increasingly replacing conventional construction due to their shorter construction timelines, cost efficiency, design flexibility, and long-term

performance. As businesses seek scalable and sustainable infrastructure, Pre-Engineered Buildings are expected to play a vital role in shaping India's industrial and commercial landscape.

Chapter Summary

Pre-Engineered Buildings represent the future of modern steel construction by combining innovative engineering, precision manufacturing, and rapid installation. Their proven advantages in speed, cost efficiency, flexibility, and sustainability have made them the preferred solution for a wide range of industrial and commercial applications across the world.

As demand for smarter infrastructure continues to grow, PEB technology will remain a cornerstone of efficient, high-performance construction. With expertise in design, manufacturing, and turnkey execution, **KMS Technologies** is committed to delivering reliable, customized Pre-Engineered Building solutions that help businesses build stronger, faster, and smarter.

Build Strong. Build Smart.



WHY CHOOSE PEB OVER CONVENTIONAL CONSTRUCTION?

Smarter Construction. Stronger Future.



**PRE-ENGINEERED
BUILDING (PEB)**

Vs



**CONVENTIONAL
BUILDING**



COST COMPARISON

Lower cost,
higher value



CONSTRUCTION SPEED

Faster construction,
quicker operations



STRUCTURAL PERFORMANCE

Strong, durable
and reliable



FUTURE EXPANSION

Flexible design,
easy expansion

Build Strong. Build Smart.

Why Pre-Engineered Buildings (PEB) Are Better Than Conventional Buildings

The Smarter Choice for Modern Construction

Selecting the right construction method is one of the most important decisions for any industrial or commercial project. While conventional reinforced concrete (RCC) buildings have been widely used for decades, the increasing demand for faster project delivery, optimized costs, and sustainable construction has led to the rapid adoption of **Pre-Engineered Buildings (PEBs)**.

PEBs are designed using advanced engineering techniques and manufactured in controlled factory environments, ensuring precision, quality, and efficiency. Compared to conventional construction, they offer significant advantages in terms of speed, flexibility, durability, and long-term value.

PEB vs Conventional Buildings

Feature	Conventional Building	Pre-Engineered Building (PEB)
Structural Weight	Heavy RCC structure	Lightweight optimized steel structure
Construction Time	Slow due to on-site work	Fast factory fabrication and quick erection
Initial Cost	Higher due to labor and materials	Cost-effective with optimized steel usage
Material Waste	More on-site wastage	Minimal waste through precision manufacturing
Future Expansion	Difficult and expensive	Simple and economical to expand
Design Flexibility	Limited modifications	Highly customizable layouts

Feature	Conventional Building	Pre-Engineered Building (PEB)
Construction Quality	Depends heavily on site conditions	Factory-controlled quality and accuracy
Maintenance	Higher over time	Lower with protective coatings and quality materials
Clear Span Capability	Limited without additional columns	Large clear spans ideal for industrial use
Environmental Impact	Higher material consumption	Sustainable, recyclable steel with reduced waste

Key Advantages of Pre-Engineered Buildings

1. Faster Construction

One of the biggest advantages of PEBs is their speed of construction. Structural components are designed and fabricated in advance, allowing foundation work and steel manufacturing to proceed simultaneously. Once delivered to the site, the building can be assembled quickly, reducing overall project timelines.

Benefits:

- Earlier project completion
- Faster operational readiness
- Reduced labor costs
- Lower project overheads

2. Lightweight Yet Strong

PEBs use high-strength steel and optimized structural designs to achieve excellent load-bearing capacity while significantly reducing the overall weight of the structure.

Advantages:

- Lower foundation costs
 - Improved seismic performance
 - Easier transportation and installation
 - Efficient use of structural materials
-

3. Cost-Effective Construction

Every steel component in a PEB is engineered to use only the material required for structural performance. This optimization reduces steel consumption, minimizes waste, and lowers construction costs.

Cost savings are achieved through:

- Faster construction
 - Reduced labor requirements
 - Lower transportation costs
 - Optimized material usage
 - Minimal maintenance over the building's lifecycle
-

4. Superior Quality

PEB components are manufactured under controlled factory conditions using advanced machinery and strict quality control procedures. This ensures precision, consistency, and compliance with engineering standards.

Factory manufacturing provides:

- Accurate dimensions
 - Consistent welding quality
 - High-quality protective coatings
 - Reliable structural performance
-

5. Easy Expansion and Modification

As businesses grow, infrastructure requirements often change. PEBs are designed with future expansion in mind, allowing additional bays, extensions, mezzanine floors, or crane systems to be incorporated with minimal disruption.

This flexibility makes PEBs ideal for:

- Warehouses
 - Manufacturing plants
 - Logistics centers
 - Distribution hubs
 - Industrial facilities
-

6. Environmentally Sustainable

Steel is one of the most recyclable construction materials available. PEB construction also generates less on-site waste and consumes fewer natural resources compared to traditional methods.

Environmental benefits include:

- Reduced construction waste
 - Recyclable steel components
 - Lower carbon footprint
-

- Energy-efficient insulation options
 - Sustainable building practices
-

7. Low Maintenance

Modern steel buildings are protected using advanced coatings and corrosion-resistant finishes that improve durability and reduce maintenance requirements.

With proper inspection and routine maintenance, PEB structures provide dependable performance over a long service life.

8. Architectural Flexibility

PEBs can be customized to meet a wide range of architectural and functional requirements.

Customization options include:

- Multiple roof profiles
 - Long clear spans
 - Crane systems
 - Mezzanine floors
 - Skylights
 - Ventilation systems
 - Canopies
 - Attractive façade designs
 - Energy-efficient roofing and wall systems
-

Ideal Applications for PEB

Pre-Engineered Buildings are widely used across various industries, including:

- Industrial Manufacturing Units
- Warehouses
- Logistics & Distribution Centers
- Aircraft Hangars
- Cold Storage Facilities
- Food Processing Plants
- Pharmaceutical Industries
- Automobile Workshops
- Commercial Buildings
- Retail Showrooms
- Sports Complexes
- Agricultural Buildings

Why Businesses Prefer PEB

Modern businesses choose Pre-Engineered Buildings because they provide the ideal balance of speed, performance, quality, and long-term value. Their ability to reduce construction timelines, optimize costs, and support future expansion makes them a practical investment for projects of all sizes.

For organizations seeking efficient, durable, and sustainable infrastructure, PEBs have become the preferred construction solution.

Chapter Summary

Compared to conventional construction, Pre-Engineered Buildings deliver faster project completion, lower costs, superior quality, greater flexibility, and improved sustainability. Their factory-engineered precision, lightweight design, and ease of expansion make them an excellent choice for modern industrial and commercial developments.

At [KMS Technologies](#), we combine engineering expertise, advanced manufacturing, and professional project execution to deliver customized PEB solutions that meet the evolving needs of businesses across India.

Build Strong. Build Smart.



COMPONENTS OF A PRE-ENGINEERED BUILDING

BUILT WITH PRECISION. DESIGNED FOR PERFORMANCE.



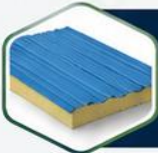
PRIMARY FRAMING

Main load-bearing
structural members



SECONDARY FRAMING

Supports primary
structure and cladding



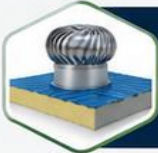
ROOF & WALL PANELS

Durable, lightweight
and efficient



BRACING SYSTEMS

Provides stability
and strength



ACCESSORIES & INSULATION

Enhances functionality,
comfort and efficiency



Every component is
precision-engineered
for quality, strength
and long-term durability.



PRECISION
ENGINEERING



SUPERIOR
QUALITY



FASTER
CONSTRUCTION



COST
EFFECTIVE



SUSTAINABLE
BUILDING

Build Strong. Build Smart.



Components of a Pre-Engineered Building (PEB)

Understanding the Building Blocks of a PEB

A [Pre-Engineered Building \(PEB\)](#) is a carefully engineered system in which every structural and architectural component is designed to work together. Each element serves a specific purpose, contributing to the building's strength, stability, durability, and functionality.

From the primary steel frame to roofing systems, ventilation, and accessories, every component is manufactured with precision to ensure efficient construction and long-term performance.

This chapter explains the key components that make up a modern Pre-Engineered Building.

1. Primary Members

Purpose

Primary members form the **main load-bearing framework** of a PEB. They transfer all structural loads—including dead loads, live loads, wind loads, and seismic forces—to the building foundation.

Components

- Built-up Columns
- Built-up Rafters
- End Wall Frames
- Portal Frames

Key Features

- Designed specifically for project loads
- High-strength structural steel

- Optimized tapered sections for reduced steel consumption
- Factory fabricated for precision

 **Illustration:** Main portal frame highlighting columns and rafters.

2. Secondary Members

Purpose

Secondary members support roof and wall cladding while transferring loads to the primary framing system.

Includes

- Purlins
- Girts
- Eave Struts
- Sag Rods
- Flange Bracing

Benefits

- Increased structural stability
- Reduced deflection
- Efficient load distribution
- Faster installation

 **Illustration:** Roof and wall framing showing secondary members.

3. Rafters

Purpose

Rafters are horizontal or inclined structural members that support the roof system and transfer roof loads to the columns.

Features

- Built-up tapered steel sections
- Designed for long clear spans
- Lightweight yet highly durable
- Optimized using structural analysis software

Applications

- Warehouses
- Aircraft Hangars
- Industrial Plants
- Sports Facilities

 **Illustration:** Inclined roof rafters in a portal frame.

4. Columns

Purpose

Columns are vertical structural members that transfer the entire building load safely to the foundation.

Types

- End Columns
- Interior Columns
- Crane Columns
- Side Wall Columns

Advantages

- High load-bearing capacity
- Excellent seismic performance
- Reduced steel weight
- Precision fabrication

 **Illustration:** Vertical steel column anchored to a concrete foundation.

5. Purlins

Purpose

Purlins are horizontal members installed on roof rafters to support roof sheets and distribute roof loads.

Common Types

- Z Purlins
- C Purlins

Advantages

- Lightweight
- Easy installation
- Excellent load distribution
- Corrosion-resistant finish

 **Illustration:** Roof purlins fixed over rafters.

6. Girts

Purpose

Girts are horizontal members fixed to columns that support wall cladding panels.

Benefits

- Provides wall stability
- Supports external cladding
- Improves wind resistance
- Maintains structural alignment

 **Illustration:** Wall girts connected between columns.

7. Bracing System

Purpose

Bracing provides lateral stability and protects the structure from wind, seismic forces, and other horizontal loads.

Types

- Rod Bracing
- Cross Bracing
- Portal Bracing
- Cable Bracing

Importance

- Controls structural movement
- Improves rigidity
- Enhances safety
- Increases overall building stability

 **Illustration:** X-shaped cross bracing between columns.

8. Roof Panels

Purpose

Roof panels protect the building from weather while providing thermal performance and durability.

Available Options

- Color-Coated Galvanized Sheets
- PUF Insulated Roof Panels
- Standing Seam Roofing
- Sandwich Roof Panels

Benefits

- Weather resistance
- Thermal insulation
- Leak prevention
- Long service life

 **Illustration:** Layered roof system with insulation.

9. Wall Panels

Purpose

Wall panels enclose the structure, improve aesthetics, and provide insulation and weather protection.

Types

- Single Skin Metal Sheets
- PUF Panels
- EPS Sandwich Panels

- Rockwool Panels
- Glass Wool Panels

Benefits

- Energy efficiency
- Fire resistance (depending on panel type)
- Noise reduction
- Attractive appearance

 **Illustration:** Side wall with insulated sandwich panels.

10. Ridge Vent

Purpose

A ridge vent is installed along the roof peak to allow hot air to escape naturally from the building.

Benefits

- Improves ventilation
- Reduces indoor temperature
- Prevents condensation
- Enhances worker comfort

 **Illustration:** Roof ridge with continuous ridge vent.

11. Turbo Ventilator

Purpose

Turbo ventilators use wind energy to extract hot air, fumes, and moisture without requiring electricity.

Advantages

- Energy-efficient
- Maintenance-friendly
- Continuous ventilation
- Suitable for industrial facilities

 **Illustration:** Roof-mounted turbo ventilator.

12. Skylight

Purpose

Skylights allow natural daylight to enter the building, reducing the need for artificial lighting during daytime.

Benefits

- Lower energy consumption
- Better working environment
- Improved visibility
- Sustainable building design

Common Materials

- Polycarbonate Sheets
- FRP (Fiber Reinforced Plastic) Panels

 **Illustration:** Translucent skylight panels integrated into the roof.

13. Crane Beam

Purpose

Crane beams support overhead travelling cranes used for lifting and moving heavy materials within industrial facilities.

Applications

- Manufacturing Plants
- Steel Fabrication Units
- Heavy Engineering Industries
- Automobile Facilities

Advantages

- High load capacity
- Smooth crane movement
- Improved operational efficiency

 **Illustration:** Overhead crane beam with travelling crane.

14. Mezzanine Floor

Purpose

A mezzanine floor creates additional usable space within the building without expanding the footprint.

Common Uses

- Office Space
- Storage Area
- Control Rooms
- Production Platforms

Benefits

- Maximizes vertical space

- Cost-effective expansion
- Flexible layout
- Quick installation

 **Illustration:** Steel mezzanine floor inside a warehouse.

How These Components Work Together

Every component of a Pre-Engineered Building is engineered to function as part of an integrated structural system:

- **Primary Members** provide the main structural framework.
- **Secondary Members** support the roof and wall systems.
- **Bracing** ensures lateral stability.
- **Roof and Wall Panels** protect the building envelope.
- **Ventilation Systems** (Ridge Vents and Turbo Ventilators) improve airflow.
- **Skylights** enhance natural lighting.
- **Crane Beams** support material handling operations.
- **Mezzanine Floors** increase usable interior space.

Together, these components create a building that is strong, efficient, adaptable, and built for long-term performance.

Chapter Summary

The strength and efficiency of a Pre-Engineered Building lie in the seamless integration of its structural and architectural components. Every element—from the primary steel frame to the smallest accessory—is designed for precision, durability, and optimal performance.

At [KMS Technologies](#), we use high-quality materials, advanced engineering practices, and stringent quality control to manufacture PEB components that deliver reliable performance across industrial, commercial, logistics, aviation, and infrastructure projects.

Build Strong. Build Smart.



TYPES OF PEB STRUCTURES

Versatile. Strong. Built for Every Industry and Every Need.



STRONG
ENGINEERING



FASTER
CONSTRUCTION



COST
EFFECTIVE



SUSTAINABLE
BUILDING



FLEXIBLE
SOLUTIONS

BUILT FOR DIVERSITY. DESIGNED FOR PERFORMANCE.



INDUSTRIAL
SHEDS



WAREHOUSES



FACTORIES



AIRCRAFT
HANGARS



COMMERCIAL
BUILDINGS



COLD STORAGE
FACILITIES



LOGISTICS
CENTERS



SPORTS
COMPLEXES



From heavy industrial applications to modern commercial spaces, PEB structures deliver **strength**, **speed**, and **sustainability** for every type of project.

*Build Strong.
Build Smart.*

Types of Pre-Engineered Building (PEB) Structures

Versatile Solutions for Every Industry

Pre-Engineered Buildings (PEBs) have revolutionized modern construction by offering flexible, durable, and cost-effective solutions for a wide range of industries. Their modular design, rapid construction, and customizable layouts make them suitable for projects of all sizes—from industrial facilities and warehouses to commercial buildings and agricultural structures.

This chapter explores the most common types of PEB structures and their applications.

1. Warehouse

Warehouses are among the most popular applications of Pre-Engineered Buildings. Designed with large clear spans and high load-bearing capacity, PEB warehouses provide maximum storage efficiency while ensuring quick construction and low maintenance.

Typical Features

- Large column-free spaces
- High roof clearance
- Loading and unloading bays
- Mezzanine options
- Natural ventilation and skylights
- Expandable design

Applications

- E-commerce fulfillment centers
- FMCG storage

- Manufacturing inventory
- Distribution warehouses
- Raw material storage

 **Illustration:** Modern steel warehouse with loading docks and trucks.

2. Factory

PEB factories provide strong, efficient, and customizable workspaces for manufacturing operations. They support heavy machinery, crane systems, and optimized production layouts.

Features

- Heavy-duty structural framing
- Overhead crane compatibility
- Ventilation systems
- Future expansion capability
- Energy-efficient roofing

Industries

- Automotive
- Textile
- Engineering
- Electronics
- Food Processing

 **Illustration:** Manufacturing plant with production equipment and overhead crane.

3. Industrial Shed

Industrial sheds are economical steel structures used for fabrication, production, assembly, storage, and workshops.

Advantages

- Fast installation
- Low maintenance
- Flexible dimensions
- Weather-resistant construction
- Cost-effective solution

Common Uses

- Fabrication units
- Workshops
- Processing plants
- Assembly facilities

 **Illustration:** Industrial shed with steel portal frames and cladding.

4. Aircraft Hangar

Aircraft hangars require exceptionally large clear spans and high structural strength. PEB technology enables the construction of spacious hangars without intermediate columns, allowing safe storage and maintenance of aircraft.

Features

- Extra-wide clear spans
- High vertical clearance
- Large sliding or folding hangar doors

- Corrosion-resistant materials
- Integrated ventilation and lighting

Applications

- Civil aviation
- Defense aviation
- Aircraft maintenance facilities
- Helicopter storage

 **Illustration:** Modern aircraft hangar with a large clear-span steel structure.

5. Cold Storage

Cold storage facilities require insulated construction to maintain controlled temperatures. PEBs combined with insulated sandwich panels create energy-efficient environments for temperature-sensitive products.

Features

- PUF/PIR insulated panels
- Airtight construction
- Moisture-resistant systems
- Hygienic interiors
- Energy-efficient operation

Industries

- Food processing
- Dairy
- Pharmaceuticals
- Agriculture

- Frozen goods

 **Illustration:** Cold storage building with insulated wall and roof panels.

6. Logistics Center

Modern logistics centers rely on large, efficient buildings that support inventory management, sorting, and transportation. PEBs provide the flexibility needed for today's fast-paced supply chains.

Features

- Large loading docks
- High storage capacity
- Truck circulation areas
- Fast construction
- Expandable infrastructure

Applications

- Distribution hubs
- Courier centers
- E-commerce warehouses
- Supply chain operations

 **Illustration:** Logistics hub with loading bays and transport vehicles.

7. Commercial Building

PEB technology is increasingly used for commercial buildings due to its modern appearance, flexible design, and quick construction.

Applications

- Office buildings
- Retail showrooms
- Shopping complexes
- Business parks
- Exhibition halls

Advantages

- Attractive architectural finishes
- Flexible interior layouts
- Energy-efficient design
- Faster project completion

 **Illustration:** Contemporary commercial building with glass façade and steel framing.

8. Metro Shed

Metro sheds are designed to accommodate metro train parking, inspection, maintenance, and servicing operations. These structures require large clear spans and robust engineering.

Features

- Long-span steel structures
- High roof clearance
- Integrated maintenance platforms
- Heavy-duty flooring
- Efficient ventilation and lighting

Applications

- Metro depots
- Train maintenance facilities
- Inspection bays

 **Illustration:** Metro maintenance shed with train tracks inside.

9. Railway Shed

Railway sheds support maintenance, storage, and servicing of locomotives, coaches, and railway equipment. PEB construction enables rapid development of these critical infrastructure facilities.

Features

- Wide-span structural design
- Heavy-duty crane support
- Durable roofing systems
- Efficient workspace layout
- Low maintenance

Applications

- Railway workshops
- Coach maintenance depots
- Equipment storage
- Service facilities

 **Illustration:** Railway maintenance shed with rail tracks and service platforms.

10. Sports Complex

PEBs are widely used to construct indoor sports arenas and recreational facilities due to their large unobstructed spaces and flexible layouts.

Applications

- Badminton halls
- Basketball courts
- Indoor stadiums
- Gymnasiums
- Multipurpose sports arenas

Benefits

- Column-free playing areas
- Excellent ventilation
- Natural lighting options
- Fast project delivery

 **Illustration:** Indoor sports arena with a clear-span roof.

11. Poultry Farm

PEBs offer hygienic, durable, and well-ventilated structures that improve operational efficiency and bird health in poultry farming.

Features

- Corrosion-resistant materials
- Natural ventilation
- Thermal insulation
- Easy cleaning and maintenance
- Expandable design

Suitable For

- Broiler farms
- Layer farms
- Hatcheries
- Feed storage facilities

 **Illustration:** Modern poultry farm with ventilated steel structure.

12. Dairy Farm

PEBs provide ideal environments for dairy operations by offering spacious layouts, proper ventilation, and durable construction that supports efficient livestock management.

Features

- Comfortable housing for livestock
- Hygienic design
- Efficient drainage systems
- Ventilation and daylighting
- Low maintenance

Applications

- Dairy cattle housing
- Milking parlors
- Feed storage
- Equipment sheds

 **Illustration:** Steel dairy farm with cattle housing and feed storage.

Advantages of PEB Structures Across All Applications

Regardless of the industry, Pre-Engineered Buildings offer several common advantages:

- Faster construction timelines
 - Cost-effective solutions
 - Lightweight yet durable steel structures
 - Large clear spans for flexible layouts
 - Easy future expansion
 - Low maintenance requirements
 - Energy-efficient insulation options
 - Sustainable and recyclable materials
 - Customizable designs to meet operational needs
-

Choosing the Right PEB Structure

The ideal PEB solution depends on factors such as:

- Intended application
 - Required clear span
 - Building dimensions
 - Load requirements
 - Climate conditions
 - Insulation needs
 - Future expansion plans
 - Budget and project timeline
-

Working with an experienced PEB manufacturer ensures that the building is engineered to meet operational requirements while complying with relevant structural and safety standards.

Chapter Summary

Pre-Engineered Buildings have become the preferred construction solution across industries because of their speed, flexibility, durability, and cost efficiency.

Whether developing a warehouse, factory, aircraft hangar, commercial complex, or agricultural facility, PEBs provide scalable and future-ready infrastructure.

At [KMS Technologies](#), we design and deliver customized PEB solutions tailored to the unique requirements of each client, ensuring reliable performance, quality craftsmanship, and timely project execution.

Build Strong. Build Smart.

.



DESIGN & ENGINEERING PROCESS

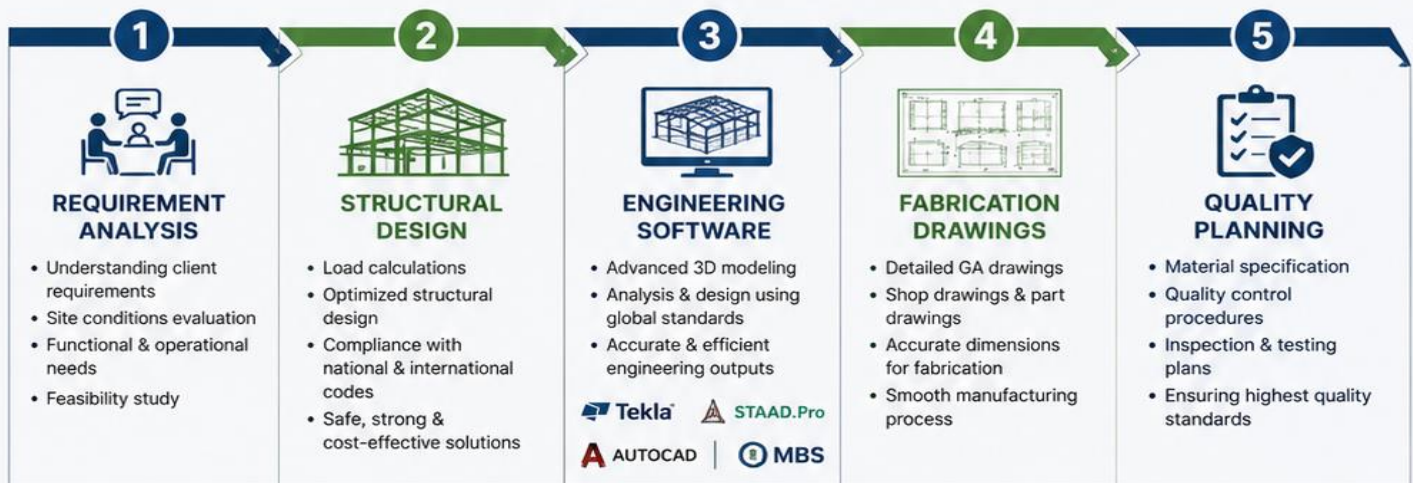
Precision in Design.
Excellence in Every Detail.

“A strong structure begins with smart engineering.

At KMS Technologies, our design and engineering process ensures safety, strength, efficiency, and performance in every PEB structure we build.



OUR ENGINEERING WORKFLOW



ENGINEERED
FOR SAFETY



DESIGNED
FOR PERFORMANCE



OPTIMIZED
FOR EFFICIENCY



DELIVERED
WITH PRECISION



BUILT FOR A
SUSTAINABLE FUTURE



From concept to creation, our engineering process ensures every structure is **reliable, efficient, and built to last.**

*Build Strong.
Build Smart.*

Design & Project Execution Process

From Concept to Completion

A successful [Pre-Engineered Building \(PEB\)](#) project is the result of a well-planned and systematic process. Every stage—from understanding the client's requirements to the final handover—is carefully managed to ensure structural integrity, quality, safety, and timely delivery.

At [KMS Technologies](#), we follow a structured workflow that combines advanced engineering, precision manufacturing, stringent quality control, and professional project execution. This integrated approach enables us to deliver customized PEB solutions that meet the highest standards of performance and reliability.

Project Workflow

Client Requirement

|



Concept Design

|



Structural Analysis

|

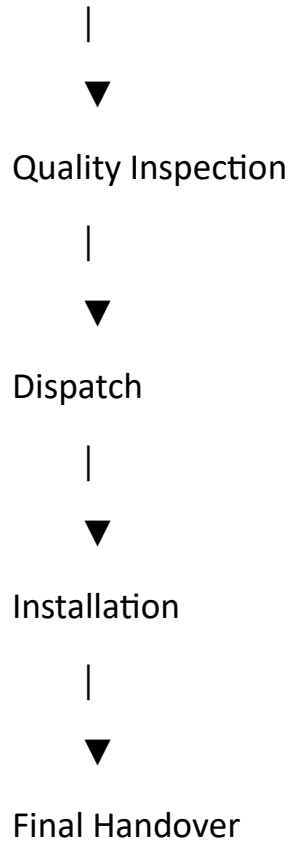


Approval Drawings

|



Manufacturing



Step 1: Client Requirement

Every project begins with a detailed consultation to understand the client's operational needs, project objectives, and site conditions.

Information Collected

- Building dimensions
- Intended application
- Location and climatic conditions
- Wind and seismic requirements
- Crane requirements
- Roof and wall specifications
- Insulation requirements

- Future expansion plans
- Budget and project timeline

Outcome

A clear project brief that forms the foundation for the engineering and design process.

Step 2: Concept Design

Based on the client's requirements, our engineering team develops an initial concept that balances functionality, efficiency, and cost.

Activities

- Preliminary building layout
- Column spacing
- Roof configuration
- Building elevation
- Functional planning
- Material selection
- Cost optimization

Deliverables

- Concept drawings
 - Preliminary building dimensions
 - Initial project proposal
-

Step 3: Structural Analysis

Once the concept is approved, the building undergoes detailed structural analysis to ensure safety and compliance with applicable design standards.

Engineering Considerations

- Dead Load
- Live Load
- Wind Load
- Seismic Load
- Crane Load (if applicable)
- Roof Load
- Deflection Limits
- Structural Stability

Design Standards

- IS 800
- IS 875
- IS 1893
- MBMA Guidelines
- AISC Standards (where applicable)

Software Used

- STAAD.Pro
- AutoCAD
- Tekla Structures
- MBS Software
- Other advanced structural design tools

Step 4: Approval Drawings

Detailed engineering drawings are prepared and shared with the client for review and approval before manufacturing begins.

Drawings Include

- General Arrangement (GA) Drawings
- Anchor Bolt Layout
- Foundation Details
- Structural Framing Layout
- Roof & Wall Cladding Layout
- Cross Sections
- Elevations
- Connection Details

Purpose

- Confirm project specifications
- Ensure design accuracy
- Prevent construction delays
- Facilitate smooth site execution

Step 5: Manufacturing

After receiving client approval, manufacturing begins at our production facility using precision fabrication processes and strict quality control.

Manufacturing Process

- Steel procurement

- CNC cutting
- Plate welding
- Drilling
- Assembly
- Surface preparation
- Shot blasting
- Primer and paint application
- Component marking
- Packaging

Benefits

- High precision
- Consistent quality
- Faster production
- Minimal material wastage

Step 6: Quality Inspection

Every structural component undergoes thorough inspection before dispatch to ensure compliance with engineering specifications and quality standards.

Inspection Parameters

- Dimensional accuracy
- Weld quality
- Surface finish
- Bolt hole alignment

- Paint thickness
- Material certification
- Component identification

Quality Objective

Deliver defect-free products that are ready for efficient on-site installation.

Step 7: Dispatch

Once approved, components are securely packed, labeled, and transported to the project site.

Dispatch Activities

- Component packaging
- Loading and securing
- Transportation planning
- Delivery scheduling
- Documentation
- Material tracking

Proper logistics planning helps ensure timely delivery and smooth project execution.

Step 8: Installation

Our experienced site team assembles the building using approved erection procedures while maintaining strict safety standards.

Installation Sequence

1. Foundation verification

2. Anchor bolt inspection
3. Column erection
4. Rafter installation
5. Bracing installation
6. Secondary member installation
7. Roof panel installation
8. Wall cladding installation
9. Accessories installation
10. Final alignment and tightening

Safety Measures

- Personal Protective Equipment (PPE)
 - Working-at-height safety
 - Crane lifting procedures
 - Daily safety inspections
 - Quality monitoring throughout installation
-

Step 9: Final Handover

After successful installation, the project undergoes a comprehensive inspection before being handed over to the client.

Final Activities

- Structural inspection
- Alignment verification
- Waterproofing checks

- Finishing inspection
- Punch list completion
- Client walkthrough
- Project documentation
- Handover certification

Outcome

A fully completed, inspected, and operational Pre-Engineered Building ready for use.

Benefits of the KMS Technologies Process

Our end-to-end approach offers several advantages:

- Single point of responsibility
 - Customized engineering solutions
 - Precision manufacturing
 - Strict quality assurance
 - Efficient project coordination
 - On-time delivery
 - Transparent communication
 - Professional installation
 - Reliable after-sales support
-

Project Lifecycle at a Glance

Stage	Primary Objective
Client Requirement	Understand project needs
Concept Design	Develop an optimized building concept
Structural Analysis	Ensure structural safety and performance
Approval Drawings	Obtain client approval before fabrication
Manufacturing	Produce precision-engineered components
Quality Inspection	Verify compliance with quality standards
Dispatch	Deliver components safely and on schedule
Installation	Assemble the structure efficiently and safely
Final Handover	Deliver a completed, ready-to-use facility

Chapter Summary

The success of a Pre-Engineered Building project depends on a well-coordinated process that integrates engineering, manufacturing, logistics, and installation. By following a structured workflow, [KMS Technologies](#) ensures that every project is executed with precision, quality, and efficiency.

From the initial consultation to the final handover, our commitment is to deliver durable, high-performance steel structures that meet our clients' expectations while adhering to the highest standards of safety and workmanship.

KMS Technologies

Build Strong. Build Smart.



MANUFACTURING PROCESS

Precision Manufacturing.
Superior Quality. Timely Delivery.



ENGINEERED TO PERFECTION

At KMS Technologies, every component is manufactured with precision, inspected with care, and built to perform for decades.

FROM RAW STEEL TO RELIABLE STRUCTURES



1

STEEL PROCUREMENT

High-quality steel sourced from trusted suppliers ensuring strength and reliability.



2

CUTTING & FABRICATION

Advanced CNC machines ensure accurate cutting and precision fabrication of all components.



3

WELDING

Skilled welders and modern welding technology deliver strong, consistent, and durable joints.



4

SURFACE PREPARATION

Shot blasting and surface cleaning remove impurities for better coating adhesion.



5

PAINTING & COATING

High-performance paints and coatings protect against corrosion and harsh environments.



6

QUALITY INSPECTION

Strict quality checks at every stage ensure compliance with international standards.



7

PACKAGING & DISPATCH

Proper packaging and safe loading ensure damage-free delivery to the project site.



PREMIUM
QUALITY STEEL



PRECISION
ENGINEERING



ADVANCED
TECHNOLOGY



RIGOROUS
QUALITY CONTROL



ON-TIME
DISPATCH



Our manufacturing process combines technology, expertise, and commitment to deliver steel structures that are **strong, efficient**, and built to last.

*Build Strong.
Build Smart.*

Manufacturing Process of a Pre-Engineered Building (PEB)

Precision Manufacturing for Stronger Steel Structures

The quality of a Pre-Engineered Building begins long before installation—it starts in the manufacturing facility. Every steel component must be fabricated with precision to ensure structural integrity, dimensional accuracy, and long-term durability.

At **KMS Technologies**, we follow a systematic manufacturing process supported by advanced machinery, skilled professionals, and stringent quality control measures. From raw steel to finished components, every stage is carefully monitored to deliver products that meet national and international quality standards.

Manufacturing Workflow

Raw Material Inspection



Steel Cutting



Welding & Fabrication



Drilling & Hole Preparation



Shot Blasting

|



Painting & Surface Protection

|



Quality Inspection

|



Marking & Packing

|



Dispatch

1. Steel Cutting

Steel cutting is the first stage of the manufacturing process. Structural steel plates and sections are cut according to approved engineering drawings using high-precision equipment.

Objectives

- Achieve accurate dimensions
- Minimize material waste
- Prepare components for fabrication
- Ensure consistency in production

Equipment Used

- CNC Plasma Cutting Machines
- CNC Oxy-Fuel Cutting Machines
- Band Saws
- Shearing Machines

Benefits

- High dimensional accuracy
- Faster production
- Reduced material wastage
- Smooth cutting edges

 **Photo Suggestion:** CNC steel cutting machine processing structural steel plates.

2. Welding & Fabrication

After cutting, steel components are assembled and welded to form built-up sections such as columns, rafters, and other structural members.

Fabrication Activities

- Plate assembly
- Web and flange welding
- Stiffener installation
- Connection plate welding
- Structural assembly

Quality Focus

- Uniform weld penetration
- Strong structural joints

- Dimensional accuracy
- Clean weld finish

Advantages

- High structural strength
- Reliable load-bearing performance
- Long service life

 **Photo Suggestion:** Skilled welder fabricating a built-up steel rafter.

3. Drilling & Hole Preparation

Precision drilling ensures that bolt holes are accurately positioned for quick and error-free assembly during site installation.

Operations

- CNC drilling
- Hole alignment
- Bolt hole preparation
- Connection detailing

Benefits

- Faster site erection
- Accurate bolt fitment
- Improved structural alignment
- Reduced installation time

 **Photo Suggestion:** CNC drilling machine preparing connection holes.

4. Shot Blasting

Shot blasting removes rust, mill scale, oil, and other surface contaminants while creating an ideal surface profile for protective coatings.

Objectives

- Clean steel surfaces
- Improve paint adhesion
- Prevent corrosion
- Increase coating durability

Advantages

- Uniform surface finish
- Enhanced corrosion resistance
- Improved coating performance
- Longer structural lifespan

 **Photo Suggestion:** Steel members exiting an automated shot blasting machine.

5. Painting & Surface Protection

Protective coatings are applied after surface preparation to safeguard the steel against corrosion, moisture, and environmental conditions.

Coating Options

- Red Oxide Primer
- Zinc-Rich Primer
- Epoxy Primer
- Polyurethane Finish

- Specialized Protective Coatings

Benefits

- Corrosion protection
- Enhanced durability
- Improved aesthetics
- Extended service life

Quality Parameters

- Uniform coating thickness
- Proper curing
- Adhesion testing
- Surface finish inspection

 **Photo Suggestion:** Automated spray painting of structural steel components.

6. Quality Inspection

Quality assurance is integrated into every stage of manufacturing. Each component undergoes detailed inspection before it is approved for dispatch.

Inspection Checklist

- Material verification
- Dimensional accuracy
- Weld quality
- Hole alignment
- Surface preparation
- Paint thickness

- Component identification
- Documentation review

Objective

Deliver defect-free structural components that meet engineering specifications and customer expectations.

 **Photo Suggestion:** Engineer inspecting steel members with measuring instruments.

7. Marking & Packing

Once approved, every component is clearly marked according to erection drawings and securely packed for transportation.

Activities

- Component numbering
- Identification marking
- Protective wrapping
- Bundling
- Loading preparation

Benefits

- Easy identification on-site
- Reduced installation errors
- Safe transportation
- Efficient unloading

 **Photo Suggestion:** Labeled steel components packed and ready for dispatch.

Advanced Manufacturing Equipment

Modern PEB manufacturing facilities utilize advanced machinery to improve precision and productivity.

Common Equipment

- CNC Plasma Cutting Machines
- CNC Oxy-Fuel Cutting Machines
- Automatic Welding Machines
- Hydraulic Presses
- Shot Blasting Machines
- Airless Painting Systems
- Overhead Cranes
- Material Handling Equipment

These technologies ensure consistency, accuracy, and efficient production.

Quality Standards Followed

To maintain the highest manufacturing standards, production processes are aligned with recognized engineering and quality practices.

Standards

- ISO 9001:2015 Quality Management System
 - IS 800 – General Construction in Steel
 - IS 875 – Design Loads
 - IS 1893 – Earthquake-Resistant Design
 - AWS Welding Practices (where applicable)
-

Why Precision Manufacturing Matters

Accurate manufacturing directly influences the performance and longevity of a Pre-Engineered Building.

Key benefits include:

- Faster on-site assembly
- Better structural performance
- Reduced material wastage
- Improved safety
- Lower maintenance costs
- Enhanced project quality
- Reliable long-term durability

Chapter Summary

The manufacturing process is the backbone of every successful Pre-Engineered Building project. From steel cutting and welding to painting, inspection, and packing, each step contributes to the overall strength, precision, and durability of the finished structure.

[At KMS Technologies](#), our commitment to advanced manufacturing, rigorous quality control, and continuous improvement ensures that every steel component is produced with exceptional accuracy and reliability. This dedication enables us to deliver high-quality PEB solutions that meet the demanding requirements of industrial, commercial, and infrastructure projects.

KMS Technologies

Build Strong. Build Smart.



INSTALLATION & PROJECT EXECUTION

From Foundation to Completion,
We Deliver Excellence.



**EXPERT EXECUTION.
ON-TIME DELIVERY.**

Our experienced team ensures safe, efficient, and high-quality installation at every stage of your PEB project.



OUR INSTALLATION & EXECUTION PROCESS

1



FOUNDATION PREPARATION

- Site survey & layout
- Excavation & leveling
- Foundation pouring
- Anchor bolt setting



2



STRUCTURAL ERECTION

- Column erection
- Rafter & beam installation
- Purlin & girt installation
- Bolt tightening & alignment



3



ROOFING & CLADDING

- Roof sheet installation
- Wall cladding installation
- Flashing & trims
- Weather sealing



4



FINISHING WORKS

- Doors & windows fitting
- Gutter & downpipe
- Insulation installation
- Internal & external finishing



5



FINAL INSPECTION

- Quality & safety inspection
- Dimensional verification
- Performance testing
- Project handover



**SAFE
WORK PRACTICES**



**PRECISE
EXECUTION**



**EXPERIENCED
TEAM**



**TIMELY
COMPLETION**



**QUALITY
ASSURED**



From the ground up to the final bolt,
we execute every project with
precision, professionalism, and
a commitment to **excellence.**

*Build Strong.
Build Smart.*

Chapter 7

Installation Process of a Pre-Engineered Building (PEB)

From Engineered Components to a Completed Structure

The installation phase is where precision-engineered steel components come together to form a complete Pre-Engineered Building. Proper planning, experienced supervision, and strict adherence to safety and quality standards are essential to ensure structural integrity and timely project completion.

[At KMS Technologies](#), every installation project is executed by skilled professionals following approved erection procedures and industry best practices. Each stage is carefully monitored to ensure accuracy, safety, and long-term performance.

PEB Installation Workflow

Foundation



Anchor Bolts



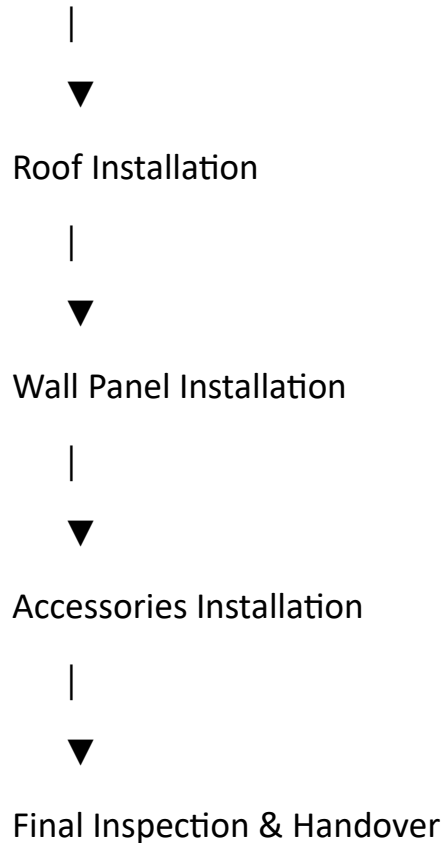
Column Erection



Beam / Rafter Installation



Bracing System



Step 1: Foundation Preparation

A strong and accurately constructed foundation is the basis of every successful PEB project. Before steel erection begins, the concrete foundation must be inspected to ensure it meets the approved design specifications.

Activities

- Foundation casting
- Level verification
- Grid line marking
- Dimensional checks
- Concrete strength confirmation
- Site cleaning and preparation

Importance

- Ensures structural stability
- Maintains proper alignment
- Prevents future settlement issues
- Supports accurate steel erection

 **Photo Suggestion:** Completed concrete foundation with marked grid lines.

Step 2: Anchor Bolt Installation

Anchor bolts are installed within the foundation to secure the steel columns. Their positioning must be highly accurate to ensure proper alignment of the structural frame.

Activities

- Bolt positioning
- Alignment checks
- Template verification
- Elevation measurement
- Final tightening preparation

Quality Checks

- Bolt spacing
- Vertical alignment
- Projection height
- Centerline accuracy

 **Photo Suggestion:** Anchor bolts fixed in a concrete pedestal.

Step 3: Column Erection

Columns form the primary vertical support system of the building. They are lifted into position using cranes and temporarily braced until the frame is stabilized.

Installation Process

- Crane lifting
- Positioning on anchor bolts
- Temporary support
- Plumbing and alignment
- Initial bolt tightening

Benefits

- Establishes the main structural framework
- Ensures vertical stability
- Supports subsequent erection stages

 **Photo Suggestion:** Steel columns being erected with a mobile crane.

Step 4: Beam / Rafter Installation

Once the columns are in place, rafters and beams are connected to create the primary structural frame of the building.

Activities

- Lifting roof rafters
- High-strength bolted connections
- Alignment verification
- Temporary bracing

Advantages

- Creates the building's roof structure
- Provides load transfer between columns
- Forms the complete portal frame

 **Photo Suggestion:** Installation of roof rafters between steel columns.

Step 5: Bracing System Installation

Bracing systems are installed to provide lateral stability and resist wind and seismic forces.

Types of Bracing

- Cross Bracing
- Rod Bracing
- Cable Bracing
- Portal Bracing

Purpose

- Improve structural rigidity
- Maintain alignment
- Resist lateral loads
- Enhance overall safety

 **Photo Suggestion:** Cross-bracing installed between structural bays.

Step 6: Roof Installation

After the structural frame is stabilized, roofing components are installed to protect the building from external weather conditions.

Components Installed

- Purlins
- Roof sheets
- Insulated roof panels
- Ridge caps
- Flashings
- Skylights
- Ridge vents
- Turbo ventilators

Benefits

- Weather protection
- Thermal insulation
- Natural lighting
- Improved ventilation

 **Photo Suggestion:** Workers installing roof panels using safety harnesses.

Step 7: Wall Panel Installation

Wall cladding completes the building enclosure while improving appearance, insulation, and environmental protection.

Materials

- Color-coated steel sheets
- PUF panels
- Sandwich panels
- Rockwool panels

- EPS panels

Benefits

- Durable exterior finish
- Improved energy efficiency
- Weather resistance
- Attractive appearance



Photo Suggestion: Side wall cladding installation.

Step 8: Accessories Installation

After the main structure is complete, building accessories are installed to enhance functionality and operational efficiency.

Accessories Include

- Rolling shutters
- Sliding doors
- Personnel doors
- Louvers
- Gutters
- Downpipes
- Canopies
- Crane systems
- Mezzanine floors
- Electrical supports
- Ventilation systems

Purpose

- Improve usability
- Increase operational efficiency
- Complete architectural finishes

 **Photo Suggestion:** Completed building with doors, gutters, skylights, and ventilation systems.

Step 9: Final Inspection & Handover

Before project completion, a comprehensive inspection is conducted to verify that the building meets engineering specifications, safety requirements, and quality standards.

Inspection Checklist

- Structural alignment
- Bolt tightening
- Roof waterproofing
- Cladding inspection
- Door and window operation
- Ventilation performance
- Surface finish
- Site cleanliness
- Safety compliance

Handover Deliverables

- Quality inspection report
- Completion certificate

- As-built documentation
- Maintenance recommendations

 **Photo Suggestion:** Final inspection by engineers before client handover.

Safety During Installation

Safety is a core priority throughout every installation project. [KMS Technologies](#) follows strict safety procedures to protect workers, equipment, and project quality.

Standard Safety Practices

- Mandatory Personal Protective Equipment (PPE)
- Full-body safety harnesses for working at height
- Certified lifting equipment and cranes
- Daily toolbox talks
- Safe material handling procedures
- Controlled lifting operations
- Regular safety inspections
- Emergency response preparedness

A strong safety culture helps minimize risks and ensures smooth project execution.

Installation Best Practices

Successful PEB installation depends on:

- Accurate foundation work
 - Proper sequencing of activities
-

- Skilled erection teams
- Quality control at every stage
- Effective coordination between engineering and site teams
- Timely availability of materials and equipment

Following these practices helps achieve faster construction, reduced rework, and reliable structural performance.

Installation Timeline Overview

Installation Stage	Primary Objective
Foundation	Prepare a stable base
Anchor Bolts	Ensure precise column positioning
Column Erection	Establish the structural framework
Beam / Rafter Installation	Complete the primary frame
Bracing	Provide lateral stability
Roof Installation	Protect the structure from weather
Wall Panel Installation	Enclose the building
Accessories Installation	Add functional and architectural elements
Final Inspection	Verify quality and prepare for handover

Chapter Summary

The installation process transforms engineered steel components into a fully functional Pre-Engineered Building. By following a structured sequence—from

foundation preparation to final inspection—projects can be completed safely, efficiently, and to the highest quality standards.

At [KMS Technologies](#), our experienced installation teams combine technical expertise, modern equipment, and rigorous safety practices to deliver durable, high-performance steel structures that are ready to support our clients' operations from day one.

KMS Technologies

Build Strong. Build Smart.



ROOFING, CLADDING & INSULATION SYSTEMS

Smart Systems. Strong Protection.
Built for Performance.



**BUILT TO WITHSTAND.
DESIGNED FOR COMFORT.**

Our roofing, cladding and insulation systems enhance energy efficiency, provide superior weather protection, and create comfortable, sustainable environments for every structure.

COMPLETE ENVELOPE SOLUTIONS

1



ROOFING SOLUTIONS

- High-performance metal roofing sheets
- Standing seam & profiled sheets
- Weather-resistant & long-lasting



2



WALL CLADDING

- Aesthetic & durable wall cladding
- Multiple profiles & color options
- Enhanced building appearance

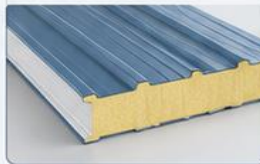


3

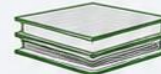


PUF PANELS

- Excellent thermal insulation
- High energy efficiency
- Lightweight & easy installation

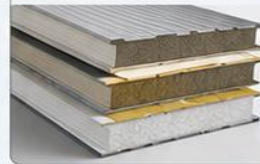


4



SANDWICH PANELS

- PUF, PIR, EPS, Rockwool, Glasswool options
- Superior insulation & strength
- Ideal for roofs, walls & partitions



5



VENTILATION & DAYLIGHTING

- Ridge ventilators, turbo ventilators & louvers
- Skylights & daylight panels
- Improved air circulation & natural lighting



THERMAL
INSULATION



WEATHER
PROTECTION



ENERGY
EFFICIENCY



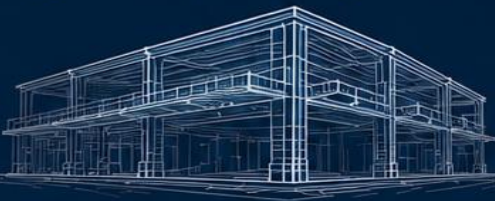
BETTER
VENTILATION



NATURAL
DAYLIGHTING



LONG TERM
DURABILITY



From advanced roofing and cladding to high-quality insulation systems, we deliver solutions that **protect**, **perform**, and provide **long-term value**.

*Build Strong.
Build Smart.*

Roofing Systems for Pre-Engineered Buildings (PEBs)

Protecting Your Building with Advanced Roofing Solutions

The roofing system is one of the most critical components of [a Pre-Engineered Building \(PEB\)](#). It not only protects the structure from environmental conditions but also plays a significant role in thermal insulation, energy efficiency, durability, and overall building performance.

[At KMS Technologies](#), we offer a range of roofing systems designed to meet the diverse requirements of industrial, commercial, logistics, and infrastructure projects. The choice of roofing depends on factors such as climate, building usage, insulation requirements, maintenance needs, and budget.

This chapter introduces the most widely used roofing systems in modern PEB construction.

Choosing the Right Roofing System

The ideal roofing solution should provide:

- Weather protection
- Structural durability
- Thermal insulation
- Water-tight performance
- Corrosion resistance
- Energy efficiency
- Low maintenance
- Long service life

Selecting the right roofing system helps reduce operating costs while improving occupant comfort and building performance.

1. Single Skin Roofing System

Overview

Single Skin Roofing consists of a single layer of color-coated galvanized or galvalume steel sheets installed over purlins. It is one of the most economical roofing solutions and is commonly used where thermal insulation is not a primary requirement.

Features

- Lightweight construction
- Easy installation
- High strength
- Corrosion-resistant coating
- Cost-effective solution

Advantages

- Lower initial investment
- Faster installation
- Minimal maintenance
- Suitable for dry and moderate climates
- Easy replacement of damaged sheets

Applications

- Industrial sheds
- Warehouses

- Workshops
- Storage facilities
- Agricultural buildings

 **Illustration:** Single-layer steel roofing sheet fixed over Z-purlins.

2. PUF Panel Roofing

Overview

PUF (Polyurethane Foam) Panels consist of insulated foam sandwiched between two metal sheets. They provide excellent thermal insulation and are widely used in temperature-controlled facilities.

Features

- High thermal efficiency
- Lightweight insulated panels
- Excellent structural strength
- Moisture resistance
- Energy-saving performance

Advantages

- Reduced energy consumption
- Comfortable indoor temperatures
- Lower HVAC operating costs
- Improved weather resistance
- Fast installation

Applications

- Cold storage

- Food processing plants
- Pharmaceutical facilities
- Clean rooms
- Industrial buildings requiring insulation

 **Illustration:** Cross-section of a PUF insulated roof panel.

3. Sandwich Panel Roofing

Overview

Sandwich Panels consist of two metal facings bonded to an insulated core. Depending on the project requirements, the core material may be PUF, PIR, EPS, Rockwool, or Glass Wool.

Core Material Options

- Polyurethane Foam (PUF)
- Polyisocyanurate (PIR)
- Expanded Polystyrene (EPS)
- Rockwool
- Glass Wool

Advantages

- Excellent thermal insulation
- Improved sound insulation
- Enhanced fire performance (depending on core type)
- Lightweight construction
- Attractive appearance

Applications

- Manufacturing facilities
- Commercial buildings
- Airports
- Data centers
- Warehouses
- Institutional buildings

 **Illustration:** Layered sandwich panel showing metal facings and insulated core.

4. Standing Seam Roofing System

Overview

Standing Seam Roofing is a premium concealed-fix roofing system where adjacent panels are joined using raised seams without exposed fasteners. This design provides exceptional weather resistance and a clean architectural appearance.

Features

- Concealed fastener system
- Continuous panel lengths
- Superior waterproofing
- Thermal movement accommodation
- Modern appearance

Advantages

- Excellent leak resistance
- Longer service life
- Minimal maintenance

- High wind performance
- Enhanced aesthetics

Applications

- Airports
- Commercial buildings
- Industrial facilities
- Exhibition halls
- Premium infrastructure projects

 **Illustration:** Standing seam roof profile with concealed fixing details.

5. Polycarbonate Skylight System

Overview

Polycarbonate skylights are translucent roofing panels integrated into the roof to allow natural daylight into the building. They improve indoor lighting while reducing dependence on artificial lighting during daytime.

Features

- High light transmission
- UV-resistant coating
- Lightweight construction
- Impact resistance
- Weather durability

Advantages

- Reduced electricity consumption
- Improved working environment

- Sustainable building design
- Enhanced indoor visibility
- Low maintenance

Common Applications

- Warehouses
- Manufacturing units
- Logistics centers
- Commercial buildings
- Sports complexes

 **Illustration:** Roof with integrated polycarbonate skylight panels.

Roofing System Comparison

Roofing System	Thermal Insulation	Waterproofing	Initial Cost	Maintenance	Typical Applications
Single Skin Roofing	Basic	Good	Low	Low	Warehouses, Workshops, Industrial Sheds
PUF Panel Roofing	Excellent	Excellent	Medium	Low	Cold Storage, Food Processing, Pharmaceuticals
Sandwich Panel Roofing	Excellent	Excellent	Medium to High	Low	Commercial, Industrial, Institutional Buildings

Roofing System	Thermal Insulation	Waterproofing	Initial Cost	Maintenance	Typical Applications
Standing Seam Roofing	Moderate (can be insulated)	Excellent	High	Very Low	Airports, Premium Commercial & Industrial Projects
Polycarbonate Skylight	Not an insulation system	Weather Resistant	Medium	Low	Daylighting for Industrial & Commercial Buildings

Factors to Consider When Selecting a Roofing System

The right roofing solution depends on several project-specific factors:

- Building purpose
- Climate conditions
- Insulation requirements
- Energy efficiency goals
- Fire performance requirements
- Structural design
- Maintenance expectations
- Budget
- Future expansion plans

Consulting with an experienced PEB manufacturer ensures the roofing system is optimized for long-term performance and operational efficiency.

KMS Technologies Roofing Solutions

At **KMS Technologies**, we provide customized roofing systems designed to meet the unique requirements of every project. Our roofing solutions combine durability, weather protection, thermal performance, and modern engineering to deliver reliable, long-lasting results.

We offer:

- Single Skin Roofing Systems
- Insulated PUF Roof Panels
- Sandwich Panel Roofing
- Standing Seam Roofing
- Polycarbonate Skylights
- Ridge Vents
- Turbo Ventilators
- Roof Flashings & Accessories

Every roofing system is manufactured and installed with precision to ensure superior performance and long service life.

Chapter Summary

The roofing system is a key element of every Pre-Engineered Building, influencing structural protection, energy efficiency, occupant comfort, and maintenance costs. By selecting the appropriate roofing solution, businesses can improve operational performance while extending the lifespan of their buildings.

At **KMS Technologies**, we combine advanced materials, precision engineering, and industry best practices to deliver roofing systems that are durable, efficient, and tailored to each client's requirements.

KMS Technologies

Build Strong. Build Smart.



QUALITY STANDARDS & SAFETY PRACTICES

Building Quality.
Ensuring Safety.
Delivering Excellence.



OUR COMMITMENT TO QUALITY & SAFETY

We follow stringent quality standards and best safety practices to deliver reliable, durable and outstanding PEB structures.



QUALITY ASSURANCE

Rigorous quality checks at every stage to ensure superior performance and long-term reliability.



ISO 9001:2015

Certified Quality Management System ensuring continuous improvement and customer satisfaction.



INDIAN STANDARDS (IS CODES)

Design and fabrication in compliance with relevant IS codes and global best practices.



WORKPLACE SAFETY

Employee safety is our priority. We follow best safety practices and provide a secure working environment.



SITE MANAGEMENT

Efficient planning, coordination and monitoring to ensure smooth execution and timely delivery.



- ✓ High Quality Materials
- ✓ Skilled & Trained Workforce
- ✓ Compliance & Certification
- ✓ Safety First Approach
- ✓ Timely & Reliable Delivery

*Build Strong.
Build Smart.*

Wall Cladding Systems for Pre-Engineered Buildings (PEBs)

Enhancing Protection, Performance, and Aesthetics

Wall cladding is an essential component of every [Pre-Engineered Building \(PEB\)](#). It acts as the building's protective envelope, shielding the structure from weather conditions while improving thermal efficiency, acoustic performance, durability, and visual appeal.

[At KMS Technologies](#), we provide a wide range of wall cladding solutions designed to meet the specific requirements of industrial, commercial, infrastructure, and institutional projects. Whether the priority is insulation, fire resistance, noise control, or cost efficiency, the right wall cladding system can significantly enhance the overall performance of a building.

This chapter explores the most commonly used wall cladding materials in modern PEB construction.

Why Wall Cladding Matters

An effective wall cladding system provides:

- Protection against rain, wind, and dust
- Thermal insulation for energy efficiency
- Improved indoor comfort
- Enhanced building aesthetics
- Increased structural durability
- Reduced maintenance costs
- Better acoustic performance
- Long-term weather resistance

Selecting the right cladding solution ensures the building remains efficient, durable, and visually appealing throughout its lifecycle.

1. PUF Panels (Polyurethane Foam Panels)

Overview

PUF (Polyurethane Foam) Panels are insulated sandwich panels consisting of a rigid polyurethane foam core bonded between two pre-painted galvanized steel sheets. These panels are widely used where excellent thermal insulation and energy efficiency are required.

Key Features

- High thermal insulation
- Lightweight construction
- Moisture resistance
- Durable steel facings
- Easy installation

Advantages

- Reduces energy consumption
- Maintains stable indoor temperatures
- Excellent weather resistance
- Faster installation
- Low maintenance requirements

Typical Applications

- Cold Storage Facilities
- Food Processing Plants

- Pharmaceutical Units
- Clean Rooms
- Industrial Buildings

 **Illustration:** Cross-section of a PUF wall panel showing the insulated foam core.

2. Rockwool Panels

Overview

Rockwool Panels are insulated sandwich panels with a mineral wool core. They are widely recognized for their superior fire resistance, thermal insulation, and sound absorption properties.

Key Features

- Non-combustible mineral wool core
- Excellent fire resistance
- High acoustic insulation
- Thermal efficiency
- Long service life

Advantages

- Enhanced fire safety
- Effective sound reduction
- Stable thermal performance
- Durable construction
- Suitable for demanding industrial environments

Typical Applications

- Power Plants
- Chemical Industries
- Manufacturing Facilities
- Warehouses
- Commercial Buildings
- High Fire-Risk Areas

 **Illustration:** Rockwool panel cross-section with mineral wool insulation.

3. Glass Wool Panels

Overview

Glass Wool Panels consist of insulated fiberglass material enclosed between metal sheets. They provide an excellent combination of thermal and acoustic insulation while remaining lightweight and easy to install.

Key Features

- Good thermal insulation
- Excellent sound absorption
- Lightweight construction
- Corrosion-resistant exterior
- Energy-efficient design

Advantages

- Improved indoor acoustics
- Reduced energy consumption
- Comfortable working environment
- Easy maintenance

- Cost-effective insulation solution

Typical Applications

- Office Buildings
- Commercial Complexes
- Educational Institutions
- Industrial Units
- Auditoriums
- Warehouses

 **Illustration:** Glass wool insulated wall panel.

4. EPS Panels (Expanded Polystyrene Panels)

Overview

EPS Panels are lightweight sandwich panels with an Expanded Polystyrene (EPS) core, offering an economical insulation solution for a variety of building applications.

Key Features

- Lightweight core
- Good thermal insulation
- Easy installation
- Economical pricing
- Smooth finished surfaces

Advantages

- Cost-effective construction
- Faster project completion

- Lower structural load
- Energy-efficient performance
- Minimal maintenance

Typical Applications

- Industrial Sheds
- Warehouses
- Temporary Structures
- Commercial Buildings
- Agricultural Facilities

 **Illustration:** EPS panel with insulated foam core.

5. Color-Coated Steel Sheets

Overview

Color-coated steel sheets are one of the most commonly used wall cladding materials for industrial and commercial PEBs. Manufactured from galvanized or galvalume steel with a protective paint coating, they provide a durable, economical, and attractive exterior finish.

Key Features

- Lightweight steel construction
- Corrosion-resistant coating
- Wide range of colors
- Weather-resistant finish
- Easy installation

Advantages

- Affordable cladding solution
- Attractive architectural appearance
- Long service life
- Low maintenance
- Excellent structural compatibility

Typical Applications

- Warehouses
- Industrial Sheds
- Manufacturing Plants
- Workshops
- Logistics Centers
- Commercial Buildings

 **Illustration:** Modern industrial building with color-coated steel wall cladding.

Comparison of Wall Cladding Systems

Wall Cladding System	Thermal Insulation	Fire Resistance	Acoustic Performance	Initial Cost	Typical Applications
PUF Panels	Excellent	Moderate	Good	Medium	Cold Storage, Food Processing, Pharmaceuticals
Rockwool Panels	Excellent	Excellent	Excellent	High	Power Plants, Chemical Industries, Manufacturing

Wall Cladding System	Thermal Insulation	Fire Resistance	Acoustic Performance	Initial Cost	Typical Applications
Glass Wool Panels	Good	Good	Excellent	Medium	Offices, Educational Institutions, Commercial Buildings
EPS Panels	Good	Moderate	Moderate	Low	Warehouses, Industrial Sheds, Temporary Structures
Color-Coated Steel Sheets	Basic	Depends on building design	Basic	Low	Warehouses, Factories, Industrial & Commercial Buildings

Choosing the Right Wall Cladding

The ideal wall cladding system depends on several project-specific factors:

- Building application
- Thermal insulation requirements
- Fire safety standards
- Noise control requirements
- Environmental conditions
- Maintenance expectations
- Budget
- Energy efficiency goals

- Architectural appearance

Consulting with an experienced PEB manufacturer ensures that the selected cladding system aligns with both functional and regulatory requirements.

KMS Technologies Wall Cladding Solutions

At **KMS Technologies**, we offer a comprehensive range of wall cladding systems designed to deliver superior performance, durability, and aesthetics.

Our solutions include:

- PUF Insulated Panels
- Rockwool Panels
- Glass Wool Panels
- EPS Sandwich Panels
- Color-Coated Steel Sheets
- Architectural Cladding Systems
- Custom Wall Panel Configurations

Every cladding solution is engineered to provide long-term reliability while enhancing the efficiency and appearance of your Pre-Engineered Building.

Chapter Summary

Wall cladding is more than an exterior covering—it is a vital component that influences energy efficiency, structural protection, fire safety, acoustic performance, and building aesthetics. Choosing the right cladding system ensures that a PEB remains durable, efficient, and well-suited to its intended application.

At **KMS Technologies**, we combine high-quality materials, precision engineering, and industry expertise to deliver wall cladding systems that meet the evolving needs of industrial, commercial, and infrastructure projects.

KMS Technologies

Build Strong. Build Smart.



INDUSTRIES WE SERVE

Versatile Solutions.
Strong Structures. Endless Possibilities.



**ENGINEERED FOR
EVERY INDUSTRY.**

From heavy industrial applications to modern commercial spaces, our PEB solutions are designed to meet the unique needs of every industry we serve.

**ONE SOLUTION.
ENDLESS POSSIBILITIES.**



1. MANUFACTURING



2. WAREHOUSING



3. LOGISTICS



4. AVIATION



5. AGRICULTURE



6. FOOD PROCESSING



7. PHARMACEUTICAL



8. INFRASTRUCTURE



9. COMMERCIAL PROJECTS



CUSTOMIZED
SOLUTIONS



HIGH STRENGTH
STRUCTURES



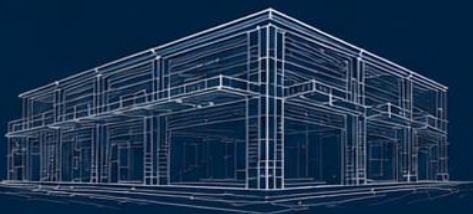
FASTER
CONSTRUCTION



SUSTAINABLE
& DURABLE



TRUSTED BY
INDUSTRIES



Wherever your industry, whatever your need, KMS Technologies delivers **reliable, efficient,** and **future-ready** PEB solutions that help your business grow.

*Build Strong.
Build Smart.*

PEB Building Accessories

Enhancing Functionality, Safety, and Performance

While the primary steel structure forms the backbone of a Pre-Engineered Building (PEB), it is the accessories that transform it into a fully functional, efficient, and user-friendly facility. Building accessories improve ventilation, natural lighting, drainage, accessibility, security, and overall operational efficiency.

At [KMS Technologies](#), we provide a complete range of high-quality PEB accessories that are carefully selected and integrated into each project based on the client's operational requirements and building design.

This chapter introduces the most commonly used accessories in modern PEB construction and explains their purpose and benefits.

Why Building Accessories Matter

Properly designed accessories help to:

- Improve indoor ventilation
- Increase natural daylight
- Protect the building from rainwater
- Enhance operational efficiency
- Improve worker comfort
- Increase building durability
- Support energy efficiency
- Reduce maintenance costs

Selecting the right accessories ensures that a PEB performs efficiently throughout its service life.

1. Turbo Ventilator

Overview

A Turbo Ventilator is a roof-mounted ventilation device that uses natural wind energy to extract hot air, humidity, smoke, and fumes from inside the building without consuming electricity.

Key Features

- Wind-driven operation
- No electrical power required
- Corrosion-resistant construction
- Continuous air circulation
- Low maintenance

Benefits

- Reduces indoor temperature
- Improves air quality
- Removes excess heat and moisture
- Lowers energy consumption
- Increases workplace comfort

Applications

- Warehouses
- Factories
- Workshops
- Manufacturing Plants
- Logistics Centers

 **Illustration:** Roof-mounted turbo ventilator on an industrial building.

2. Ridge Monitor

Overview

A Ridge Monitor is a continuous ventilating structure installed along the roof ridge that allows warm air to escape while drawing fresh air into the building.

Key Features

- Natural ventilation
- Continuous airflow
- Rain protection design
- Durable construction
- Compatible with insulated roofing

Benefits

- Maintains comfortable indoor temperatures
- Improves air circulation
- Reduces humidity
- Enhances energy efficiency

Applications

- Large manufacturing facilities
- Aircraft Hangars
- Industrial Sheds
- Warehouses



Illustration: Roof ridge monitor integrated into a PEB roof.

3. Louvers

Overview

Louvers are fixed or adjustable ventilation openings installed on walls to allow airflow while preventing rainwater, debris, and direct sunlight from entering the building.

Key Features

- Natural ventilation
- Weather protection
- Low maintenance
- Durable materials
- Architectural appearance

Benefits

- Improves indoor airflow
- Controls heat buildup
- Reduces moisture accumulation
- Supports ventilation systems

Applications

- Industrial Buildings
- Utility Rooms
- Warehouses
- Mechanical Areas

 **Illustration:** Wall-mounted metal louvers.

4. Canopy

Overview

A Canopy is an external roof projection designed to provide shelter over entrances, loading docks, and outdoor work areas.

Key Features

- Steel structural support
- Weather-resistant roofing
- Custom dimensions
- Architectural enhancement

Benefits

- Protection from rain and sunlight
- Safer loading and unloading operations
- Improved building appearance
- Additional covered workspace

Applications

- Loading Bays
- Commercial Entrances
- Factory Access Points
- Warehouse Dock Areas

 **Illustration:** Steel canopy above a loading dock.

5. Rolling Shutter

Overview

Rolling Shutters provide secure and space-efficient access for industrial and commercial buildings. They are widely used for loading bays and vehicle entry points.

Key Features

- Vertical rolling operation
- Heavy-duty steel construction
- Manual or motorized options
- High security

Benefits

- Space-saving design
- Durable operation
- Enhanced security
- Easy maintenance

Applications

- Warehouses
- Factories
- Distribution Centers
- Industrial Sheds

 **Illustration:** Industrial rolling shutter at a warehouse entrance.

6. Sliding Door

Overview

Sliding Doors are designed for large openings where smooth horizontal movement provides easy access for vehicles, machinery, or equipment.

Key Features

- Large clear openings
- Smooth track operation
- Heavy-duty construction
- Custom sizes

Benefits

- Efficient material movement
- Reliable operation
- Suitable for oversized openings
- Long service life

Applications

- Aircraft Hangars
- Manufacturing Units
- Warehouses
- Logistics Facilities



Illustration: Large steel sliding door on an aircraft hangar.

7. Personnel Door

Overview

Personnel Doors are pedestrian access doors designed for safe and convenient movement of employees and visitors.

Key Features

- Steel or insulated construction

- Secure locking systems
- Fire-rated options available
- Durable finish

Benefits

- Safe pedestrian access
- Improved security
- Easy installation
- Low maintenance

Applications

- Offices
- Factories
- Warehouses
- Commercial Buildings

 **Illustration:** Steel personnel access door.

8. FRP Skylight

Overview

FRP (Fiber Reinforced Plastic) Skylights allow natural daylight to enter the building, reducing dependence on artificial lighting while improving indoor visibility.

Key Features

- High light transmission
- UV-resistant material
- Lightweight construction

- Weather-resistant

Benefits

- Reduced electricity usage
- Better working conditions
- Sustainable building design
- Easy maintenance

Applications

- Warehouses
- Manufacturing Plants
- Logistics Centers
- Commercial Buildings

 **Illustration:** Roof with integrated FRP skylight panels.

9. Gutter System

Overview

Gutters collect rainwater from the roof and channel it toward downpipes, protecting the building and foundation from water damage.

Key Features

- Galvanized steel construction
- High drainage capacity
- Corrosion-resistant finish
- Durable design

Benefits

- Efficient rainwater management
- Protects walls and foundation
- Prevents roof overflow
- Extends building life

Applications

- All PEB structures
- Warehouses
- Factories
- Commercial Buildings

 **Illustration:** Roof gutter with rainwater collection.

10. Downpipe

Overview

Downpipes carry rainwater from the gutter system to the drainage network, ensuring safe and controlled water disposal.

Key Features

- Corrosion-resistant material
- High flow capacity
- Secure wall mounting
- Long service life

Benefits

- Prevents water accumulation
- Protects foundations

- Supports efficient drainage
- Reduces maintenance requirements

Applications

- Industrial Buildings
- Commercial Structures
- Warehouses
- Logistics Centers

 **Illustration:** Downpipe connected to the roof gutter system.

Accessory Selection Guide

Accessory	Primary Function	Key Benefits	Typical Applications
Turbo Ventilator	Roof Ventilation	Natural airflow, heat extraction	Factories, Warehouses
Ridge Monitor	Continuous Ventilation	Temperature control, air circulation	Industrial Buildings
Louvers	Wall Ventilation	Fresh air intake, weather protection	Utility Areas, Workshops
Canopy	Weather Protection	Covered entrances and loading areas	Warehouses, Commercial Buildings
Rolling Shutter	Secure Access	Space-saving, durable	Industrial Sheds, Logistics Centers
Sliding Door	Large Vehicle Access	Smooth operation, wide openings	Aircraft Hangars, Warehouses

Accessory	Primary Function	Key Benefits	Typical Applications
Personnel Door	Pedestrian Access	Safety, security	Offices, Factories
FRP Skylight	Natural Daylighting	Reduced energy use	Industrial & Commercial Buildings
Gutter	Rainwater Collection	Roof drainage	All PEB Structures
Downpipe	Rainwater Disposal	Foundation protection	All PEB Structures

Why Choose KMS Technologies Accessories?

Every accessory supplied by [KMS Technologies](#) is selected to complement the building's structural design while maximizing operational efficiency and long-term reliability.

Our Advantages

- Premium-quality materials
 - Customized solutions
 - Seamless integration with PEB systems
 - Durable and weather-resistant products
 - Professional installation
 - Low maintenance
 - Compliance with industry standards
-

Chapter Summary

Building accessories are essential elements that improve the functionality, safety, comfort, and efficiency of a Pre-Engineered Building. From ventilation and daylighting to access systems and rainwater management, each accessory contributes to the overall performance and longevity of the structure.

At **KMS Technologies**, we provide a complete range of engineered PEB accessories designed to meet the specific needs of industrial, commercial, infrastructure, and institutional projects. Our solutions ensure every building is not only structurally sound but also practical, efficient, and ready for long-term operation.

KMS Technologies

Build Strong. Build Smart.



FEATURED PROJECTS & CASE STUDIES

Real Projects. Real Impact.
Built with Precision. Delivered with Pride.



**BUILT ON TRUST.
PROVEN BY RESULTS.**

Explore our diverse portfolio of successfully executed PEB projects across industries. Each structure reflects our commitment to quality, innovation, and client satisfaction.

OUR PROJECT PORTFOLIO



PROJECT HIGHLIGHTS

Key project snapshots showcasing our expertise, scale, and timely delivery.



CLIENT SUCCESS STORIES

Hear from our satisfied clients about their experience and the value we delivered.



AIRCRAFT HANGAR PROJECT

Specialized hangars built with precision engineering and aviation-grade quality.



INDUSTRIAL & WAREHOUSE PROJECTS

Robust, efficient, and cost-effective solutions for industrial and warehouse applications.



ENGINEERED
FOR EXCELLENCE



QUALITY
YOU CAN TRUST



ON-TIME
DELIVERY



CLIENT-CENTRIC
APPROACH



PROVEN TRACK
RECORD



From concept to completion, our projects stand as a testament to our **engineering excellence, innovation, and dedication** to our clients.

*Build Strong.
Build Smart.*

Quality Standards & Engineering Codes for Pre-Engineered Buildings

Building Excellence Through International Engineering Standards

The strength, safety, and long-term performance of a [Pre-Engineered Building \(PEB\)](#) depend not only on quality materials and manufacturing but also on adherence to recognized engineering standards and design codes.

At **KMS Technologies**, every project is designed, manufactured, and executed following applicable Indian and international standards. These standards provide a structured framework for structural design, material selection, fabrication, welding, quality assurance, and safety, ensuring that every building performs reliably throughout its intended service life.

This chapter introduces the key engineering codes and quality standards commonly applied in modern PEB construction.

Why Engineering Standards Matter

Engineering standards help ensure that every PEB is:

- Structurally safe
- Durable and reliable
- Designed for expected loads
- Manufactured with consistent quality
- Constructed using approved engineering practices
- Compliant with applicable regulations
- Optimized for long-term performance

By following these standards, engineers can deliver buildings that withstand environmental conditions while maintaining safety and operational efficiency.

1. IS 800 – General Construction in Steel

Overview

IS 800 is the primary Indian Standard governing the design and construction of steel structures. It provides guidelines for structural analysis, member design, connections, fabrication, and erection.

Covers

- Structural steel design
- Member strength calculations
- Bolted and welded connections
- Stability requirements
- Serviceability criteria
- Fabrication and erection guidelines

Importance in PEB

- Ensures structural safety
- Optimizes steel usage
- Standardizes engineering practices
- Supports efficient structural design

2. IS 875 – Design Loads for Buildings and Structures

Overview

IS 875 specifies the loads that must be considered while designing buildings and structures. These loads are essential for determining the structural capacity of a PEB.

Typical Design Loads

- Dead Load
- Live Load
- Wind Load
- Roof Load
- Equipment Load
- Maintenance Load

Importance in PEB

- Ensures safe load distribution
 - Improves structural reliability
 - Supports accurate engineering calculations
 - Reduces the risk of structural failure
-

3. IS 1893 – Criteria for Earthquake Resistant Design

Overview

IS 1893 provides guidelines for designing structures capable of resisting earthquake forces.

Design Considerations

- Seismic zones
- Soil conditions
- Structural response
- Building importance
- Dynamic loading

- Lateral force calculations

Importance in PEB

- Improves earthquake resistance
 - Enhances structural stability
 - Protects life and property
 - Meets national seismic safety requirements
-

4. MBMA – Metal Building Manufacturers Association

Overview

The **Metal Building Manufacturers Association (MBMA)** publishes widely accepted design practices and recommendations for metal building systems.

Areas Covered

- Structural design principles
- Building system performance
- Loading recommendations
- Construction best practices
- Quality guidelines

Importance in PEB

- Supports optimized building design
 - Promotes proven engineering methods
 - Improves overall system performance
 - Recognized internationally within the metal building industry
-

5. AISC – American Institute of Steel Construction

Overview

The **American Institute of Steel Construction (AISC)** develops internationally recognized specifications and design guides for structural steel buildings.

Covers

- Steel member design
- Structural connections
- Stability analysis
- Fabrication practices
- Quality requirements
- Construction procedures

Importance in PEB

- Provides internationally accepted engineering guidance
- Supports efficient steel design
- Encourages consistency in fabrication and construction
- Complements other applicable structural standards

6. AWS Welding Standards

Overview

The **American Welding Society (AWS)** publishes standards that establish best practices for welding procedures, welder qualifications, inspection, and quality assurance.

Areas Covered

- Welding procedures

- Welder qualification
- Weld inspection
- Joint preparation
- Quality control
- Testing methods

Importance in PEB

- Ensures strong, reliable welded connections
- Improves fabrication quality
- Reduces welding defects
- Supports long-term structural performance

Quality Assurance at KMS Technologies

Quality is integrated into every stage of our project execution process—from engineering and procurement to manufacturing, installation, and final handover.

Our Quality Approach

- Detailed engineering review
- Material verification
- Controlled manufacturing processes
- Dimensional inspections
- Welding quality checks
- Surface preparation inspections
- Coating thickness verification
- Pre-dispatch inspections

- Site quality monitoring
- Final project inspection

This systematic approach helps ensure that every project meets the required quality benchmarks and client expectations.

Quality Control During Manufacturing

Each structural component is inspected before dispatch to verify compliance with approved engineering drawings and specifications.

Typical Inspection Parameters

- Steel grade verification
- Dimensional accuracy
- Weld quality
- Hole alignment
- Surface cleanliness
- Paint thickness
- Component identification
- Packing quality

Consistent inspections reduce errors, improve installation efficiency, and contribute to the overall reliability of the finished building.

Standards at Different Project Stages

Project Stage	Applicable Standards & Practices
---------------	----------------------------------

Structural Design	IS 800, IS 875, IS 1893, MBMA, AISC
-------------------	-------------------------------------

Project Stage	Applicable Standards & Practices
Load Analysis	IS 875, IS 1893
Fabrication	IS 800, AISC, AWS Welding Standards
Welding	AWS Welding Standards
Quality Control	Internal QA/QC Procedures with Applicable Codes
Installation	Approved Engineering Drawings & Industry Best Practices

Benefits of Following Engineering Standards

By adhering to recognized standards, PEB projects achieve:

- Improved structural safety
 - Reliable engineering performance
 - Consistent product quality
 - Better durability
 - Efficient use of materials
 - Reduced maintenance
 - Enhanced customer confidence
 - Compliance with project specifications
-

Chapter Summary

Engineering standards form the foundation of every successful Pre-Engineered Building project. They ensure that structures are designed, manufactured, and installed using proven methodologies that prioritize safety, quality, and long-term performance.

At **KMS Technologies**, our commitment to engineering excellence is reflected in our adherence to recognized design codes, rigorous quality control processes, and continuous improvement practices. This enables us to deliver durable, efficient, and reliable PEB solutions for industrial, commercial, infrastructure, and institutional applications.

KMS Technologies

Build Strong. Build Smart.



FREQUENTLY ASKED QUESTIONS (FAQs)

Your Questions.
Our Expert Answers.

Everything you need to know
about Pre-Engineered Buildings
— all in one place.



**CLEAR ANSWERS.
BETTER DECISIONS.
STRONGER PROJECTS.**

At KMS Technologies, we believe in transparency and clarity. Explore answers to the most common questions about PEB structures, design, cost, maintenance, and more.



COMMON QUESTIONS ABOUT PEB

Get answers to general questions about Pre-Engineered Buildings, their benefits, applications, and more.



DESIGN & CONSTRUCTION

Learn about the design process, material specifications, construction timeline, and quality standards.



COST & MAINTENANCE

Understand cost factors, maintenance requirements, and tips to optimize the life of your PEB building.



EXPANSION & CUSTOMIZATION

Find out how PEB structures can be easily expanded and customized to meet your future needs.



“No question is too small when it comes to building the perfect structure.
We're here to help!”

- ✓ EXPERT GUIDANCE
- ✓ TRANSPARENT PROCESS
- ✓ TRUSTED SOLUTIONS



EXPERT SUPPORT



QUICK RESPONSES



RELIABLE SOLUTIONS



COMPLETE SATISFACTION

*Build Strong.
Build Smart.*

Chapter 12

Safety Standards in Pre-Engineered Building Construction

Safety First. Quality Always.

Safety is the foundation of every successful construction project. In the Pre-Engineered Building (PEB) industry, where heavy steel components, cranes, welding operations, and work at height are part of daily activities, maintaining a strong safety culture is essential.

[At KMS Technologies](#), safety is not just a requirement—it is a core value integrated into every stage of project execution. From manufacturing and transportation to on-site installation and final handover, we are committed to protecting our workforce, clients, equipment, and project assets through strict adherence to safety standards and best practices.

This chapter highlights the key safety measures followed during PEB construction.

Why Safety Matters

An effective safety program helps to:

- Protect workers from injuries
- Prevent accidents and equipment damage
- Improve project efficiency
- Ensure regulatory compliance
- Reduce downtime and delays
- Enhance quality of workmanship
- Build client confidence

A safe workplace leads to higher productivity, better project outcomes, and long-term operational success.

1. Personal Protective Equipment (PPE)

Overview

Personal Protective Equipment (PPE) provides the first line of defense against workplace hazards. Every worker entering a construction site must wear the appropriate PPE for the task being performed.

Standard PPE Includes

- Safety Helmet
- High-Visibility Safety Vest
- Safety Shoes
- Protective Gloves
- Safety Goggles
- Ear Protection
- Full-Body Safety Harness (for work at height)
- Face Shield (for cutting and grinding)
- Respiratory Protection (when required)

Benefits

- Reduces injury risks
- Protects against falling objects
- Improves visibility on site
- Enhances worker safety
- Supports compliance with site safety policies

 **Illustration:** Construction workers wearing complete PPE.

2. Fall Protection

Overview

Working at elevated locations presents one of the highest risks on a construction site. Fall protection systems are implemented to prevent falls and ensure worker safety during roof installation and steel erection.

Safety Measures

- Full-body safety harnesses
- Lifelines and anchor points
- Guardrails
- Safety nets
- Certified scaffolding
- Mobile work platforms

Best Practices

- Inspect equipment before use
- Secure harnesses correctly
- Maintain three-point contact while climbing
- Keep work areas free from obstructions

 **Illustration:** Worker secured with a safety harness while installing roof panels.

3. Crane Safety

Overview

Cranes are used to lift and position heavy steel components during PEB installation. Safe lifting operations require careful planning, qualified personnel, and regular equipment inspections.

Safety Guidelines

- Pre-lift planning
- Certified crane operators
- Inspection of lifting equipment
- Proper rigging practices
- Safe load handling
- Clear communication using hand signals or radios
- Restricted lifting zones

Benefits

- Prevents lifting accidents
- Protects workers and equipment
- Improves installation efficiency
- Ensures stable component placement

 **Illustration:** Mobile crane lifting a steel column under controlled conditions.

4. Working at Height

Overview

Roof installation, structural assembly, and accessory installation often require personnel to work at significant heights. Strict procedures help minimize risks associated with elevated work.

Safe Working Practices

- Approved access systems
- Certified scaffolding
- Safe ladders
- Elevated work platforms
- Secure anchorage points
- Continuous supervision
- Weather condition monitoring

Worker Responsibilities

- Wear fall protection equipment
- Use designated access routes
- Report unsafe conditions immediately
- Avoid working during severe weather



Illustration: Installation team working safely on a steel roof using fall protection.

5. Hot Work Safety

Overview

Hot work includes activities such as welding, cutting, grinding, and other operations that generate heat, sparks, or open flames. These activities require additional safety precautions to reduce fire and burn hazards.

Safety Procedures

- Hot work permit system
- Fire extinguisher availability
- Removal of combustible materials

- Welding screens
- Proper ventilation
- Continuous fire watch where required
- Equipment inspection before use

Personal Protection

- Welding helmet
- Flame-resistant gloves
- Fire-resistant clothing
- Face shield
- Respiratory protection (when necessary)

 **Illustration:** Welder performing hot work with protective equipment and fire safety measures.

6. Site Safety Management

Overview

Site safety management involves planning, monitoring, and continuously improving safety practices throughout the project lifecycle.

Site Safety Activities

- Daily toolbox talks
- Safety inductions for new personnel
- Hazard identification
- Risk assessments
- Emergency preparedness
- Housekeeping inspections

- Safety audits
- Incident reporting and corrective actions

Emergency Preparedness

- Clearly marked emergency exits
- First aid kits
- Emergency contact information
- Evacuation procedures
- Trained first responders
- Assembly points

 **Illustration:** Site safety briefing conducted before the start of work.

Safety Responsibilities

Safety is a shared responsibility among everyone involved in the project.

Management

- Establish safety policies
- Provide resources and training
- Conduct inspections
- Promote a safety-first culture

Supervisors

- Monitor work activities
- Enforce safety procedures
- Identify hazards
- Guide and support workers

Workers

- Follow safety instructions
 - Wear required PPE
 - Report hazards promptly
 - Use equipment correctly
 - Participate in safety training
-

Daily Safety Checklist

Before starting work, teams should verify:

- PPE is worn correctly.
- Tools and equipment are in good condition.
- Lifting equipment has been inspected.
- Weather conditions are suitable.
- Work areas are clean and organized.
- Emergency equipment is available.
- Fall protection systems are in place.
- All workers have attended the toolbox talk.

This routine helps reduce risks and improve overall site safety.

Safety Culture at KMS Technologies

At **KMS Technologies**, safety is embedded in every project through:

- Regular safety training
 - Strict PPE compliance
-

- Qualified supervisors
- Equipment inspections
- Safe lifting procedures
- Work-at-height controls
- Continuous site monitoring
- Ongoing safety awareness programs

Our goal is to create a safe working environment while delivering projects on time, without compromising quality or operational excellence.

Safety Standards at a Glance

Safety Area	Key Objective	Essential Measures
PPE	Personal protection	Helmet, vest, gloves, shoes, goggles, harness
Fall Protection	Prevent falls	Lifelines, harnesses, guardrails, safety nets
Crane Safety	Safe lifting operations	Certified operators, inspections, rigging plans
Working at Height	Safe elevated work	Scaffolds, platforms, fall arrest systems
Hot Work	Fire and burn prevention	Permits, extinguishers, PPE, fire watch
Site Safety	Overall project safety	Toolbox talks, inspections, housekeeping, emergency planning

Chapter Summary

Safety is an integral part of every Pre-Engineered Building project. By implementing robust safety procedures, providing appropriate training, and maintaining strict compliance with industry best practices, construction activities can be carried out efficiently while minimizing risks.

At **KMS Technologies**, we believe that every project should be completed without compromising the health and safety of our workforce. Our commitment to safe working practices enables us to deliver high-quality PEB solutions with confidence, reliability, and responsibility.

KMS Technologies

Build Strong. Build Smart.



WHY KMS TECHNOLOGIES?

Stronger Structures.
Smarter Solutions.
Greater Value.

At KMS Technologies, we combine engineering expertise, advanced technology, and a customer-first approach to deliver world-class PEB solutions that stand the test of time.



OUR PROMISE.
QUALITY. COMMITMENT.
EXCELLENCE.

We don't just build structures,
we build trust and long-term
partnerships.



OUR STRENGTHS

- Experienced & skilled team
- Advanced manufacturing facility
- High-quality raw materials
- Strong engineering expertise
- Timely execution & delivery



COMPETITIVE ADVANTAGES

- Cost-effective PEB solutions
- Faster construction & delivery
- Customized design approach
- Cutting-edge technology
- Compliance with global quality standards



PROJECT DELIVERY PROCESS

- Requirement Analysis
- Design & Engineering
- Manufacturing & Quality Check
- Timely Delivery & Installation
- Handover & Support



CUSTOMER SUPPORT

- Dedicated support team
- Quick response & resolution
- On-site assistance
- After-sales service
- Long-term relationship



- ✓ Engineering Excellence
- ✓ Quality You Can Trust
- ✓ Timely Delivery
- ✓ Customer Satisfaction
- ✓ Building Long-Term Partnerships

*Build Strong.
Build Smart.*

Industries We Serve

Customized Pre-Engineered Building Solutions for Every Industry

Every industry has unique operational requirements, and no two facilities are exactly alike. At [KMS Technologies](#), we design and deliver customized Pre-Engineered Building (PEB) solutions that address the specific needs of different sectors. Our expertise in engineering, manufacturing, and installation enables us to create durable, efficient, and scalable steel structures that support business growth and operational excellence.

Whether the requirement is a high-capacity warehouse, a modern manufacturing plant, an aircraft hangar, or a temperature-controlled cold storage facility, our solutions are engineered for performance, safety, and long-term value.

Industries We Serve

1. Warehousing

Modern warehouses require large, unobstructed spaces to maximize storage capacity and streamline material handling. Our PEB warehouses are designed for flexibility, quick construction, and future expansion.

Typical Features

- Large clear spans
- High roof clearance
- Loading docks
- Mezzanine options
- Natural ventilation
- Expandable layouts

Applications

- Distribution centers
- Inventory storage
- E-commerce fulfillment
- Raw material warehouses

 **Illustration:** Modern steel warehouse with loading bays.

2. Manufacturing

Manufacturing facilities demand robust structures capable of supporting heavy machinery, overhead cranes, and efficient production lines.

Benefits

- Crane-ready structures
- Flexible layouts
- High load-bearing capacity
- Excellent ventilation
- Future expansion capability

Industries

- Engineering
- Electronics
- Machinery
- Consumer goods

 **Illustration:** Industrial manufacturing plant with overhead cranes.

3. Textile Industry

Textile facilities require spacious production floors, controlled environments, and efficient ventilation systems to support continuous operations.

Key Advantages

- Large production areas
- Good natural lighting
- Proper air circulation
- Efficient material movement

Applications

- Spinning mills
- Weaving units
- Garment factories
- Textile processing plants

 **Illustration:** Modern textile manufacturing facility.

4. Food Processing

Food processing plants require hygienic, insulated, and easy-to-maintain buildings that comply with industry standards.

Features

- Insulated wall and roof panels
- Hygienic interiors
- Temperature control
- Moisture resistance
- Easy cleaning

Applications

- Food packaging
- Beverage plants
- Dairy processing
- Frozen food facilities

 **Illustration:** Food processing plant with insulated PEB construction.

5. Pharmaceutical Industry

Pharmaceutical facilities demand precision-engineered structures that support clean environments, controlled temperatures, and regulatory compliance.

Advantages

- Clean room compatibility
- Thermal insulation
- Controlled environment
- Durable construction
- Efficient layouts

Applications

- Medicine manufacturing
- Packaging units
- Research facilities
- Storage warehouses

 **Illustration:** Pharmaceutical manufacturing building.

6. Agriculture

Agricultural infrastructure benefits from durable, low-maintenance steel buildings that provide efficient storage and operational spaces.

Applications

- Grain storage
- Farm equipment sheds
- Poultry farms
- Dairy farms
- Fertilizer storage

Benefits

- Weather protection
- Corrosion-resistant construction
- Fast installation
- Long service life

 **Illustration:** Agricultural steel building.

7. Automobile Industry

Automobile manufacturing and service facilities require strong structures with wide clear spans and support for heavy equipment.

Applications

- Assembly plants
- Service workshops
- Spare parts warehouses
- Vehicle inspection centers

Benefits

- Heavy equipment support
- Flexible floor layouts
- High roof clearance
- Efficient operations

 **Illustration:** Automobile manufacturing facility.

8. Airports & Aviation

PEB technology is ideal for aviation infrastructure due to its ability to create large clear-span structures without internal columns.

Applications

- Aircraft hangars
- Maintenance facilities
- Equipment storage
- Aviation workshops

Advantages

- Wide clear spans
- High structural strength
- Large access doors
- Efficient space utilization

 **Illustration:** Aircraft hangar with clear-span steel structure.

9. Railways

Railway infrastructure requires durable structures capable of supporting maintenance operations, equipment storage, and service facilities.

Applications

- Railway sheds
- Coach maintenance depots
- Workshops
- Equipment storage

Benefits

- Long-span construction
- Heavy-duty design
- Low maintenance
- Fast project execution

 **Illustration:** Railway maintenance shed.

10. Cold Storage

Cold storage facilities require insulated buildings that maintain controlled temperatures while reducing energy consumption.

Features

- PUF insulated panels
- Airtight construction
- Hygienic interiors
- Energy-efficient design

Applications

- Food storage
- Dairy products

- Pharmaceuticals
- Frozen goods

 **Illustration:** Temperature-controlled cold storage facility.

11. Logistics

The logistics industry depends on efficient distribution centers that enable smooth movement of goods and rapid order fulfillment.

Features

- High storage capacity
- Multiple loading bays
- Expandable layouts
- Fast construction

Applications

- Distribution hubs
- Courier centers
- Freight terminals
- E-commerce warehouses

 **Illustration:** Logistics center with loading docks and transport vehicles.

12. Infrastructure

PEBs are increasingly used in infrastructure projects because of their speed, flexibility, and durability.

Applications

- Metro depots

- Bus terminals
- Utility buildings
- Public service facilities
- Industrial parks

Benefits

- Rapid project delivery
- Long service life
- Low maintenance
- Custom-engineered designs

 **Illustration:** Modern infrastructure facility built using PEB technology.

Why Industries Choose KMS Technologies

Businesses across multiple sectors trust **KMS Technologies** because we provide complete, end-to-end PEB solutions.

Our Strengths

- Customized engineering
- Advanced manufacturing
- Precision fabrication
- Fast project execution
- High-quality materials
- Cost-effective solutions
- Compliance with engineering standards
- Experienced installation teams

- Reliable after-sales support

Every project is designed to maximize operational efficiency while delivering long-term durability and value.

Industry Solutions Overview

Industry	Typical PEB Applications	Key Benefits
Warehousing	Storage & Distribution Centers	Large clear spans, fast construction
Manufacturing	Production Plants	Heavy equipment support, flexible layouts
Textile	Mills & Garment Units	Spacious interiors, ventilation
Food Processing	Processing Plants	Hygienic, insulated buildings
Pharmaceutical	Manufacturing & Storage	Controlled environments, thermal efficiency
Agriculture	Farm Buildings	Weather protection, low maintenance
Automobile	Assembly & Service Centers	Wide spans, crane-ready structures
Airports	Aircraft Hangars	Column-free spaces, high clearance
Railways	Maintenance Sheds	Durable, long-span construction
Cold Storage	Temperature-Controlled Facilities	Energy-efficient insulation
Logistics	Distribution Hubs	Loading docks, expandable layouts

Industry	Typical PEB Applications	Key Benefits
Infrastructure	Metro & Public Facilities	Rapid construction, reliable performance

Chapter Summary

Pre-Engineered Buildings have become the preferred construction solution for a wide range of industries because they combine speed, flexibility, durability, and cost efficiency. From warehousing and manufacturing to aviation, infrastructure, agriculture, and logistics, PEBs provide tailored solutions that support modern business operations.

[At KMS Technologies](#), we take pride in delivering customized PEB solutions engineered to meet the specific requirements of every industry. Our commitment to innovation, quality, and customer satisfaction enables us to build structures that drive productivity and support long-term growth.

KMS Technologies

Build Strong. Build Smart.



CONTACT US

Let's Build Stronger Together.



We are here to answer your queries and provide the best PEB solutions for your business needs.



YOUR VISION.
OUR COMMITMENT.

At KMS Technologies, we value every connection. Reach out to us and let's create strong, smart and sustainable structures together.



QUALITY



SAFETY



INTEGRITY



COMMITMENT

01



COMPANY INFORMATION

- KMS Technologies**
Complete PEB Solution
- Established: 2020
- Cabin No. 111, SL Tower,
Alpha-1, Greater Noida,
Uttar Pradesh, India – 201308
- ISO 9001:2015 Certified



02



OUR SERVICES

- ✓ PEB Design & Engineering
- ✓ Manufacturing
- ✓ Supply & Installation
- ✓ Industrial Sheds & Warehouses
- ✓ PUF & Sandwich Panels
- ✓ Turnkey PEB Solutions
- ✓ Accessories & Crane Systems
- ✓ After Sales Support



03



CONTACT DETAILS

- +91 9311719666
- info@kmstechnologies.co.in
- Mon – Sat: 9:00 AM – 6:00 PM
- Serving Pan India
Specialized in Noida,
Delhi NCR & Uttar Pradesh



04



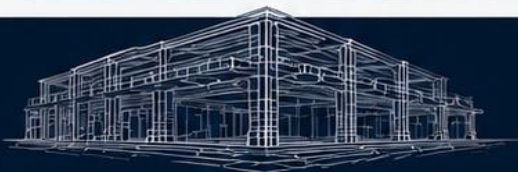
WEBSITE & SOCIAL MEDIA

www.kmstechnologies.co.in

Follow us on:



[/kmstechnologies](https://www.kmstechnologies.co.in)



*Build Strong.
Build Smart.*



WE ARE JUST A CALL AWAY!

Let's discuss your project and build the future together.

Project Case Studies

Delivering Excellence Through Real-World PEB Projects

Every completed project reflects our commitment to engineering excellence, precision manufacturing, quality workmanship, and customer satisfaction. At **KMS Technologies**, we deliver customized [Pre-Engineered Building \(PEB\)](#) solutions that meet the unique requirements of industrial, commercial, infrastructure, and institutional clients.

This chapter showcases selected projects that demonstrate our expertise in designing, manufacturing, and installing high-performance steel structures across diverse industries.

Case Study 1

Aircraft Hangar

Project Overview

Client

Confidential (Aviation Sector)

Location

Kishangarh, Rajasthan

Project Area

15,000 Sq. Ft.

Building Type

Pre-Engineered Aircraft Hangar

Project Status

Under Construction

Estimated Completion Time

Approximately **4–5 Months** (subject to project schedule)

Project Scope

KMS Technologies was entrusted with the engineering, manufacturing, and installation of a modern Pre-Engineered Aircraft Hangar designed to accommodate aircraft storage and maintenance operations.

The project requires a large clear-span structure capable of providing unobstructed internal space while ensuring high structural strength, durability, and operational efficiency.

Project Objectives

- Large column-free aircraft parking area
 - High-strength steel structure
 - Fast-track construction
 - Future expansion capability
 - Weather-resistant roofing and wall systems
 - Safe and efficient installation
-

Challenges

Every aviation project presents unique engineering challenges.

Key Challenges

- Designing a long clear-span structure
 - Maintaining dimensional accuracy during erection
-

- Heavy steel component lifting
 - Working at significant heights
 - Coordinating fabrication and site installation
 - Completing construction within a strict schedule
-

KMS Technologies Solution

Our engineering and project execution teams developed a customized PEB solution to meet all functional and structural requirements.

Solution Highlights

- Optimized clear-span structural design
 - Precision-engineered primary steel members
 - High-quality roofing and wall cladding systems
 - Efficient project planning and sequencing
 - Strict quality assurance procedures
 - Comprehensive site safety management
 - Professional installation using heavy lifting equipment
-

Building Features

- Clear-span steel structure
- High roof clearance
- Heavy-duty structural framing
- Weather-resistant roofing
- Durable wall cladding

- Industrial-grade accessories
 - Natural ventilation
 - Future expansion flexibility
-

Project Benefits

The completed aircraft hangar will provide:

- Efficient aircraft storage
 - Spacious maintenance area
 - Reduced construction time
 - Long service life
 - Low maintenance costs
 - High structural reliability
 - Cost-effective operation
-

Construction Progress

Current Status

- ✓ Foundation completed
 - ✓ Anchor bolt installation completed
 - ✓ Structural steel fabrication completed
 - ✓ Steel erection in progress
 - ✓ Roof framing under installation
 - ⌚ Wall cladding to follow
 - ⌚ Final finishing and accessories
-

(Update project status with the latest construction progress before publishing.)

Project Highlights

Parameter	Details
Project Name	Aircraft Hangar
Location	Kishangarh, Rajasthan
Area	15,000 Sq. Ft.
Structure Type	Pre-Engineered Building
Industry	Aviation
Roofing	Insulated Metal Roofing System
Wall Cladding	Color-Coated Steel / Insulated Panels
Ventilation	Turbo Ventilators & Ridge Vent
Status	Under Construction

[Why Our Clients Choose KMS Technologies](#)

Our project portfolio reflects our ability to deliver reliable, high-quality PEB solutions across multiple industries.

Our Strengths

- Customized engineering
 - Advanced manufacturing
 - Experienced project teams
-

- Fast project execution
- Strict quality control
- Safety-first approach
- Timely delivery
- Comprehensive after-sales support

Each project is executed with a focus on structural performance, operational efficiency, and long-term value.

Chapter Summary

Real-world projects demonstrate the practical advantages of Pre-Engineered Buildings and the capabilities of **KMS Technologies**. From aviation infrastructure to industrial facilities, every project showcases our commitment to innovation, quality, and customer satisfaction.

As we continue to expand our portfolio across India, our mission remains the same—to deliver engineered steel structures that are strong, efficient, and built to last.

KMS Technologies

Build Strong. Build Smart.



BONUS RESOURCES

Tools, Guides & References to Support Your PEB Journey

A collection of valuable resources, checklists, guides, and technical references to help you plan, build, and maintain your Pre-Engineered Building with confidence.



YOUR COMPLETE RESOURCE HUB

Handpicked resources to simplify planning, reduce costs, improve performance, and ensure long-term value.



PEB PLANNING CHECKLIST

Step-by-step checklist to ensure nothing is missed in your PEB planning process.



BUILDING COST FACTORS

Key factors that influence the cost of Pre-Engineered Buildings.



STEEL BUILDING MAINTENANCE GUIDE

Essential maintenance practices to extend the life and performance of your building.



TECHNICAL GLOSSARY

Common technical terms and definitions used in PEB design and construction.



PEB TERMINOLOGY

Important PEB-related terminology for better understanding and communication.



QUICK REFERENCE CHARTS

Handy charts and tables for quick reference on key design parameters.



PLAN BETTER
BUILD SMARTER



REDUCE COSTS
IMPROVE EFFICIENCY



ENSURE QUALITY
LONG-TERM VALUE



EXPERT RESOURCES
AT YOUR FINGERTIPS

Frequently Asked Questions (FAQs)

Everything You Need to Know About Pre-Engineered Buildings

Choosing a [Pre-Engineered Building \(PEB\)](#) is a significant investment, and clients often have questions about design, construction, cost, durability, maintenance, and applications. This chapter answers the most common questions to help you make an informed decision.

1. What is a Pre-Engineered Building (PEB)?

A [Pre-Engineered Building \(PEB\)](#) is a steel structure designed, fabricated, and manufactured in a factory before being transported to the construction site for assembly. It offers faster construction, cost efficiency, and superior structural performance compared to conventional construction.

2. Why are PEBs becoming popular?

PEBs offer faster construction, lower costs, reduced material wastage, high durability, flexibility in design, and easier future expansion.

3. What are the advantages of a PEB over conventional buildings?

- Faster construction
 - Lightweight structure
 - Cost-effective
 - Factory-controlled quality
 - Low maintenance
 - Easy expansion
 - Better seismic performance
-

- Environmentally friendly
-

4. How long does it take to complete a PEB project?

Project timelines depend on size and complexity. Most industrial PEB projects are completed within **8 to 20 weeks**, including design, manufacturing, and installation.

5. What is the expected lifespan of a PEB?

With proper design, quality materials, protective coatings, and regular maintenance, a PEB can have a service life of **40–60 years or more**.

6. Can a PEB withstand earthquakes?

Yes. PEBs are engineered according to applicable seismic design standards such as **IS 1893**, making them suitable for earthquake-prone regions.

7. Are PEBs resistant to high wind speeds?

Yes. Buildings are designed to withstand wind loads in accordance with **IS 875** and project-specific wind conditions.

8. Can a PEB be expanded in the future?

Yes. One of the major advantages of PEB construction is its modular design, which allows for future expansion with minimal disruption.

9. What types of buildings can be constructed using PEB technology?

PEBs are suitable for:

- Warehouses
 - Factories
 - Industrial sheds
 - Aircraft hangars
 - Cold storage facilities
 - Logistics centers
 - Commercial buildings
 - Sports complexes
 - Railway sheds
 - Poultry and dairy farms
-

10. Which industries use PEBs?

PEBs are widely used in warehousing, manufacturing, food processing, pharmaceuticals, agriculture, automobile, aviation, logistics, railways, infrastructure, and commercial sectors.

11. What materials are used in a PEB?

Typical materials include structural steel, galvanized steel sections, color-coated steel sheets, insulated panels, bolts, fasteners, and protective coatings.

12. What roofing options are available?

Common roofing systems include:

- Single Skin Roofing
 - PUF Panels
-

- Sandwich Panels
 - Standing Seam Roofing
 - Polycarbonate or FRP Skylights
-

13. Which wall cladding options are available?

Wall cladding systems include:

- Color-Coated Steel Sheets
 - PUF Panels
 - Rockwool Panels
 - Glass Wool Panels
 - EPS Panels
-

14. Can insulation be added to a PEB?

Yes. Roofs and walls can be insulated using PUF, PIR, Rockwool, Glass Wool, or EPS panels based on project requirements.

15. Are PEBs suitable for hot climates?

Yes. Insulated roofing and wall systems help maintain comfortable indoor temperatures while reducing energy consumption.

16. Can cranes be installed in a PEB?

Yes. PEBs can be designed to support overhead cranes, gantry cranes, and material handling systems.

17. What is a clear-span building?

A clear-span building is a structure without internal columns, providing maximum usable floor space for operations and storage.

18. Can mezzanine floors be included?

Yes. Mezzanine floors can be incorporated into the structural design to create additional usable space.

19. Are skylights available?

Yes. FRP and polycarbonate skylights can be integrated into the roofing system to provide natural daylight.

20. What ventilation options are available?

Ventilation solutions include:

- Turbo Ventilators
 - Ridge Monitors
 - Louvers
 - Roof Vent Systems
-

21. What quality standards are followed?

Projects are designed and executed in accordance with standards such as **IS 800, IS 875, IS 1893, MBMA, AISC, and AWS Welding Standards**, where applicable.

22. Are PEBs environmentally friendly?

Yes. Steel is recyclable, manufacturing generates less waste, and insulated buildings improve energy efficiency.

23. Is maintenance expensive?

No. Routine inspections, cleaning, and periodic repainting or recoating (when required) are generally sufficient to maintain long-term performance.

24. What maintenance is required?

Recommended maintenance includes:

- Roof inspection
 - Bolt tightening checks
 - Gutter cleaning
 - Surface cleaning
 - Paint inspection
 - Sealant inspection
-

25. Can solar panels be installed on a PEB roof?

Yes. Roof systems can be designed to accommodate solar photovoltaic (PV) installations, subject to structural design considerations.

26. Are PEBs suitable for cold storage?

Yes. Insulated PUF or PIR panels are commonly used to create temperature-controlled environments.

27. How are PEB components transported?

Steel components are factory-fabricated, labeled, packed, and transported to the site for assembly.

28. Is welding performed on-site?

Most structural connections are bolted. Limited site welding may be required depending on project-specific details.

29. What foundation is required?

The foundation type depends on soil conditions, building loads, and structural design. A geotechnical investigation is typically recommended.

30. Can PEBs support heavy machinery?

Yes. Buildings can be engineered to support heavy industrial equipment, mezzanine floors, and crane systems.

31. Are customized designs available?

Yes. Every building is engineered to meet the client's operational, architectural, and structural requirements.

32. What roof slopes are available?

Roof slope is selected based on drainage, climate, and project requirements, and is determined during the design phase.

33. Can doors and windows be customized?

Yes. Rolling shutters, sliding doors, personnel doors, windows, louvers, and canopies can all be customized.

34. Are PEBs fire-resistant?

Steel itself is non-combustible, and fire performance can be enhanced using appropriate insulation systems, protective coatings, and fire-rated wall panels where required.

35. Is corrosion protection provided?

Yes. Structural steel is protected using primers, paint systems, or specialized protective coatings selected for the project's environment.

36. Why choose KMS Technologies?

KMS Technologies provides complete PEB solutions including:

- Design
 - Engineering
 - Manufacturing
 - Supply
 - Installation
 - Quality Assurance
 - After-Sales Support
-

37. Does KMS Technologies provide turnkey solutions?

Yes. We offer end-to-end project execution, from concept and engineering through manufacturing, installation, and project handover.

38. How is project quality ensured?

Quality is maintained through:

- Material inspections
- Precision manufacturing
- Welding inspections
- Dimensional verification
- Coating inspections
- Final quality audits

39. How can I request a quotation?

Share your project details, including location, building dimensions, intended use, crane requirements (if any), and preferred completion timeline. Our engineering team will prepare a customized proposal.

40. How can I contact KMS Technologies?

For project inquiries, design consultation, or technical support, contact our team through our official phone number, email, or website. We are committed to providing reliable engineering solutions and responsive customer service.

Quick Reference

Category	Topics Covered
General	PEB basics, advantages, applications
Design	Standards, expansion, customization

Category	Topics Covered
Construction	Timeline, installation, foundations
Roofing & Cladding	Roofing systems, wall panels, insulation
Performance	Wind, earthquake, durability
Maintenance	Inspection, cleaning, corrosion protection
Services	Turnkey execution, quality, support

Chapter Summary

Pre-Engineered Buildings are engineered to provide speed, flexibility, durability, and cost efficiency across a wide range of industries. Understanding the fundamentals of design, construction, maintenance, and performance helps stakeholders make informed decisions and maximize the long-term value of their investment.

At **KMS Technologies**, we are committed to delivering reliable PEB solutions backed by engineering expertise, stringent quality standards, and dedicated customer support. Our team is always ready to answer your questions and help bring your project to life.

KMS Technologies

Build Strong. Build Smart.



COST FACTORS

IN

PRE-ENGINEERED BUILDINGS (PEBs)

Understanding the key cost factors helps in better planning, budgeting, and delivering value-driven PEB projects with efficiency and transparency.



SMART PLANNING.
OPTIMIZED COSTS.
BETTER RESULTS.



EVERY FACTOR MATTERS,
EVERY DECISION COUNTS.

A well-planned approach to cost factors ensures quality, efficiency, and long-term value.



• KEY COST FACTORS IN PEB PROJECTS •



MATERIAL COST

Steel prices, raw materials, coatings, and ancillary materials.



DESIGN & ENGINEERING

Complexity of design, customization, detailing, and engineering time.



MANUFACTURING & FABRICATION

Production processes, labor, machinery, and quality control.



TRANSPORTATION

Distance, logistics, loading/unloading, and site accessibility.



ERECTION & INSTALLATION

Labor, equipment, erection time, and site conditions.



FINISHING & ACCESSORIES

Roofing, wall panels, doors, windows, cranes, and other accessories.



OPTIMIZE COSTS.
MAXIMIZE VALUE.
BUILD WITH CONFIDENCE.



Better Budget
Planning



Efficient Resource
Utilization



Higher ROI &
Long-Term Savings



Quality & Durability
Assured

Cost Factors in Pre-Engineered Buildings (PEBs)

Understanding What Influences the Cost of a PEB

One of the most common questions from clients is, "**How much does a Pre-Engineered Building cost?**" The answer depends on several technical, structural, and project-specific factors.

Unlike conventional construction, where costs are often estimated using standard rates, every Pre-Engineered Building is custom-designed to meet specific operational and engineering requirements. As a result, the final project cost is influenced by the building's dimensions, location, design loads, material specifications, accessories, and installation requirements.

At **KMS Technologies**, we provide transparent and optimized solutions that balance structural performance, durability, and overall project value.

Major Cost Factors

The total cost of a PEB is influenced by the following key elements:

- Steel Prices
- Building Size
- Roofing System
- Crane Requirements
- Wind Load
- Seismic Zone
- Building Accessories
- Foundation Design

Understanding these factors helps clients plan budgets more effectively and make informed project decisions.

1. Steel Prices

Overview

Steel is the primary material used in a Pre-Engineered Building, making it one of the most significant cost components. Market fluctuations in raw material prices directly impact the overall project cost.

Factors Affecting Steel Prices

- Global steel demand
- Raw material availability
- Transportation costs
- Manufacturing costs
- Government policies and taxes
- Supply chain conditions

Impact on Project Cost

- Higher steel prices increase structural costs.
- Stable pricing supports more predictable project budgets.
- Optimized engineering helps reduce unnecessary steel consumption without compromising structural integrity.

2. Building Size

Overview

The dimensions of a building significantly influence material quantities, fabrication requirements, transportation, and installation costs.

Size Parameters

- Building Width
- Building Length
- Building Height
- Number of Bays
- Roof Span

Cost Impact

- Larger buildings require more structural steel.
 - Greater heights may require heavier members.
 - Long clear spans demand specialized structural design.
 - Larger projects often benefit from economies of scale.
-

3. Roofing System

Overview

The choice of roofing system affects both the initial investment and the building's long-term operational efficiency.

Roofing Options

- Single Skin Roofing
- PUF Insulated Panels
- Sandwich Panels
- Standing Seam Roofing
- Polycarbonate or FRP Skylights

Cost Considerations

Roofing Type	Initial Cost	Long-Term Benefits
Single Skin	Low	Economical for general industrial use
PUF Panels	Medium	Excellent thermal insulation and energy savings
Sandwich Panels	Medium to High	Superior insulation and comfort
Standing Seam Roofing	High	Premium waterproofing and durability
Skylights	Moderate	Reduced daytime lighting costs

Selecting the appropriate roofing system should balance upfront cost with long-term operational savings.

4. Crane Requirement

Overview

Many industrial facilities require overhead cranes for material handling. Incorporating cranes into the structural design increases engineering complexity and steel requirements.

Crane Design Factors

- Crane capacity
- Crane span
- Number of cranes
- Crane duty cycle
- Runway beam design
- Dynamic loading

Cost Impact

- Heavier structural members
- Additional crane beams
- Reinforced connections
- Increased fabrication requirements

While crane systems increase initial costs, they significantly improve operational efficiency in manufacturing environments.

5. Wind Load

Overview

Buildings must be designed to withstand the wind conditions of their specific location. Wind loads vary by geographic region, terrain, and building height.

Design Considerations

- Geographic location
- Wind speed
- Terrain category
- Building height
- Roof geometry

Cost Impact

Higher wind loads may require:

- Stronger structural members
- Additional bracing
- Enhanced roof and wall connections
- More robust fastening systems

These measures improve structural safety and long-term performance.

6. Seismic Zone

Overview

In earthquake-prone regions, buildings must be designed to resist seismic forces in accordance with applicable standards.

Factors

- Seismic zone classification
- Soil conditions
- Building importance
- Structural configuration

Cost Impact

Seismic design may require:

- Additional bracing
- Reinforced connections
- Increased structural stiffness
- Enhanced detailing

These features help improve building resilience during seismic events.

7. Building Accessories

Overview

Accessories enhance the functionality and efficiency of a PEB but also contribute to the overall project cost.

Common Accessories

- Turbo Ventilators
- Ridge Monitors
- Louvers
- Canopies
- Rolling Shutters
- Sliding Doors
- Personnel Doors
- Skylights
- Gutters
- Downpipes
- Mezzanine Floors
- Crane Systems

Cost Impact

The number, type, and specifications of accessories influence both material and installation costs. Selecting only the accessories required for operational needs helps optimize the project budget.

8. Foundation Design

Overview

The foundation transfers building loads safely to the ground. Foundation costs vary based on structural loads and site-specific soil conditions.

Factors Affecting Foundation Cost

- Soil bearing capacity
- Building loads

- Groundwater conditions
- Foundation type
- Local site conditions

Common Foundation Types

- Isolated Footings
- Combined Footings
- Raft Foundations
- Pile Foundations (where required)

Cost Impact

A detailed geotechnical investigation helps engineers design a safe and economical foundation tailored to the site.

Additional Factors That Influence Cost

Beyond the primary cost drivers, several other considerations can affect the final project budget:

- Project location
- Transportation distance
- Site accessibility
- Building complexity
- Construction schedule
- Material availability
- Surface coating requirements
- Fire protection systems
- Insulation specifications

- Local statutory requirements

Proper planning during the design stage helps minimize unexpected expenses.

Cost Optimization Strategies

KMS Technologies helps clients maximize value through smart engineering and efficient project execution.

Our Approach

- Optimized structural design
- Efficient steel utilization
- Standardized components where appropriate
- High-quality manufacturing
- Fast-track construction methods
- Careful material planning
- Value engineering without compromising safety or quality

These practices reduce waste, improve productivity, and enhance overall project economics.

Typical Cost Contribution

Cost Component	Approximate Influence on Total Project Cost*
Structural Steel	40–55%
Roofing & Wall Cladding	15–25%
Fabrication & Manufacturing	10–15%
Transportation & Logistics	5–10%

Cost Component	Approximate Influence on Total Project Cost*
----------------	--

Installation & Erection	10–15%
-------------------------	--------

Accessories & Finishing	5–10%
-------------------------	-------

*Percentages are indicative and vary based on project size, specifications, and site conditions.

Planning Your Budget

Before requesting a quotation, it is helpful to gather the following information:

- Project location
- Building dimensions (Length × Width × Height)
- Intended building use
- Crane requirements (if any)
- Roofing and wall panel preferences
- Insulation requirements
- Site conditions
- Preferred completion timeline

Providing complete project information enables a more accurate engineering assessment and cost estimate.

Chapter Summary

The cost of a Pre-Engineered Building is influenced by multiple engineering, material, and project-specific factors. Elements such as steel prices, building size, roofing systems, crane requirements, wind loads, seismic considerations, accessories, and foundation design all contribute to the final investment.

At **KMS Technologies**, we focus on delivering cost-effective PEB solutions through optimized engineering, quality manufacturing, and efficient project execution. By understanding these cost factors early in the planning process, clients can make informed decisions that balance performance, durability, and long-term value.

KMS Technologies

Build Strong. Build Smart.



WHY CHOOSE KMS TECHNOLOGIES?

Your Trusted Partner for Pre-Engineered Building Excellence.

At KMS Technologies, we combine innovation, experience, and commitment to deliver high-quality, cost-effective, and timely PEB solutions tailored to your needs.



Smart Engineering



Quality Assurance



Timely Delivery



Customer Satisfaction



**WE DON'T JUST BUILD STRUCTURES,
WE BUILD RELATIONSHIPS.**

KMS Technologies is committed to providing end-to-end PEB solutions with integrity, transparency, and trust.



REASONS TO CHOOSE KMS TECHNOLOGIES



EXPERIENCE & EXPERTISE

Years of industry experience and a skilled team delivering innovative PEB solutions.



CUSTOMIZED SOLUTIONS

Tailored designs and solutions to match your specific requirements and industry needs.



PREMIUM QUALITY

High-grade materials and stringent quality checks for durable and reliable structures.



ON-TIME DELIVERY

Efficient planning, streamlined processes and on-time project delivery, every time.



COST-EFFECTIVE SOLUTIONS

Optimized design and resource utilization to provide the best value for your investment.



DEDICATED SUPPORT

End-to-end support from consultation to after-sales service. We are with you, always.



**BUILT ON TRUST.
DRIVEN BY
COMMITMENT.**



ISO 9001:2015
CERTIFIED



100+
SUCCESSFUL
PROJECTS



EXPERT
ENGINEERING
TEAM



SAFETY
FIRST
APPROACH



PAN INDIA
SERVICE
NETWORK



KMS
TECHNOLOGIES
COMPLETE PEB SOLUTION



+91 9311719666



info@kmstechnologies.co.in



www.kmstechnologies.co.in

Why Choose KMS Technologies

Your Trusted Partner for Complete Pre-Engineered Building Solutions

Choosing the right [Pre-Engineered Building \(PEB\)](#) partner is just as important as selecting the right building system. A successful project depends on experienced engineering, precision manufacturing, quality materials, professional installation, and reliable after-sales support.

At **KMS Technologies**, we combine technical expertise, advanced manufacturing capabilities, and a customer-centric approach to deliver high-performance PEB solutions tailored to the unique needs of every client. From concept to completion, our team is committed to delivering projects that are efficient, durable, and built to the highest standards of quality.

Our Commitment

We believe every structure should be:

- Strong and durable
- Cost-effective
- Delivered on time
- Engineered for performance
- Built with uncompromising quality
- Designed for future growth

Our goal is to create steel buildings that help businesses expand with confidence.

1. End-to-End PEB Solutions

Complete Project Management Under One Roof

KMS Technologies offers comprehensive solutions covering every stage of the project lifecycle.

Our Services Include

- Project consultation
- Site assessment
- Structural design
- Engineering analysis
- Manufacturing
- Supply and logistics
- Installation and erection
- Quality inspections
- Final handover
- After-sales support

By managing every stage internally, we ensure seamless coordination, consistent quality, and efficient execution.

2. Customized Engineering

Every Building Is Designed for Your Business

No two projects are the same. Our engineering team develops customized PEB solutions based on each client's operational requirements, site conditions, and future expansion plans.

We Customize

- Building dimensions
- Structural layouts

- Clear spans
- Crane systems
- Mezzanine floors
- Roofing systems
- Wall cladding
- Ventilation
- Daylighting
- Building accessories

This tailored approach delivers optimal functionality and long-term value.

3. Modern Manufacturing

Precision Fabrication with Advanced Technology

Our manufacturing process is designed to produce high-quality structural components with exceptional accuracy and consistency.

Manufacturing Capabilities

- CNC steel cutting
- Precision drilling
- Automated welding
- Surface preparation
- Protective painting
- Dimensional inspections
- Quality-controlled packaging

Factory-controlled production minimizes errors, reduces waste, and accelerates project timelines.

4. Quality Assurance

Built on Engineering Excellence

Quality is integrated into every stage of our operations, from material procurement to final project handover.

Our Quality Process

- Material verification
- Engineering reviews
- Dimensional inspections
- Welding quality checks
- Surface preparation inspections
- Paint and coating verification
- Pre-dispatch inspections
- Site quality monitoring
- Final acceptance inspections

Our rigorous quality control processes help ensure reliable performance and long-term durability.

5. Experienced Installation Teams

Professional Site Execution

Even the best-engineered building requires skilled installation. Our experienced site teams follow approved engineering drawings, safe work practices, and proven installation procedures to ensure accurate assembly.

Installation Expertise

- Steel structure erection
- Roof installation
- Wall cladding installation
- Accessory installation
- Alignment verification
- Safety compliance
- Final inspections

Efficient installation minimizes project delays while maintaining the highest standards of workmanship.

6. Timely Project Delivery

Speed Without Compromising Quality

Time is a critical factor for every project. Our streamlined processes enable faster execution while maintaining strict quality standards.

How We Deliver on Time

- Detailed project planning
- Efficient manufacturing schedules
- Optimized logistics
- Coordinated site activities
- Continuous progress monitoring
- Experienced project management

Timely delivery allows clients to begin operations sooner and maximize their return on investment.

7. Competitive Pricing

Maximum Value for Your Investment

Our optimized engineering and efficient manufacturing processes help deliver cost-effective PEB solutions without compromising quality or structural integrity.

Value Engineering Benefits

- Optimized steel consumption
- Efficient fabrication
- Reduced construction time
- Lower labor costs
- Minimal material waste
- Long-term maintenance savings

We focus on delivering the best total value—not simply the lowest initial cost.

8. Reliable After-Sales Support

Building Long-Term Relationships

Our commitment continues even after project completion. We provide responsive support to help clients maintain the performance and longevity of their buildings.

Support Services

- Technical guidance
- Maintenance recommendations
- Inspection assistance
- Expansion consultation
- Replacement component support
- Customer service assistance

Our goal is to build lasting partnerships based on trust, reliability, and continuous support.

Our Core Strengths

KMS Technologies stands apart through:

- Comprehensive project execution
- Experienced engineering professionals
- Advanced manufacturing processes
- Strict quality control
- Safety-focused installation
- Customized building solutions
- Transparent communication
- On-time project delivery
- Dedicated customer support

These strengths enable us to consistently deliver projects that meet client expectations and industry standards.

Our Project Delivery Process

Client Consultation



Requirement Analysis



Concept & Structural Design



Engineering Approval



Manufacturing



Quality Inspection



Dispatch & Logistics



Installation



Final Inspection



Project Handover



After-Sales Support

Why Clients Trust KMS Technologies

Our Strength

Benefit to Clients

End-to-End Solutions

Single point of responsibility

Customized Engineering

Building tailored to project needs

Modern Manufacturing

Precision and consistent quality

Quality Assurance

Reliable and durable structures

Our Strength

Benefit to Clients

Skilled Installation Teams Accurate and safe project execution

Timely Delivery Faster project completion

Competitive Pricing Better long-term value

After-Sales Support Ongoing technical assistance

Our Vision

To become one of India's most trusted and innovative providers of Pre-Engineered Building solutions by delivering world-class engineering, exceptional quality, and customer-focused service.

Our Mission

- Deliver reliable and customized PEB solutions.
 - Maintain the highest standards of quality and safety.
 - Continuously improve engineering and manufacturing processes.
 - Build long-term relationships through trust and performance.
 - Support sustainable and efficient industrial development.
-

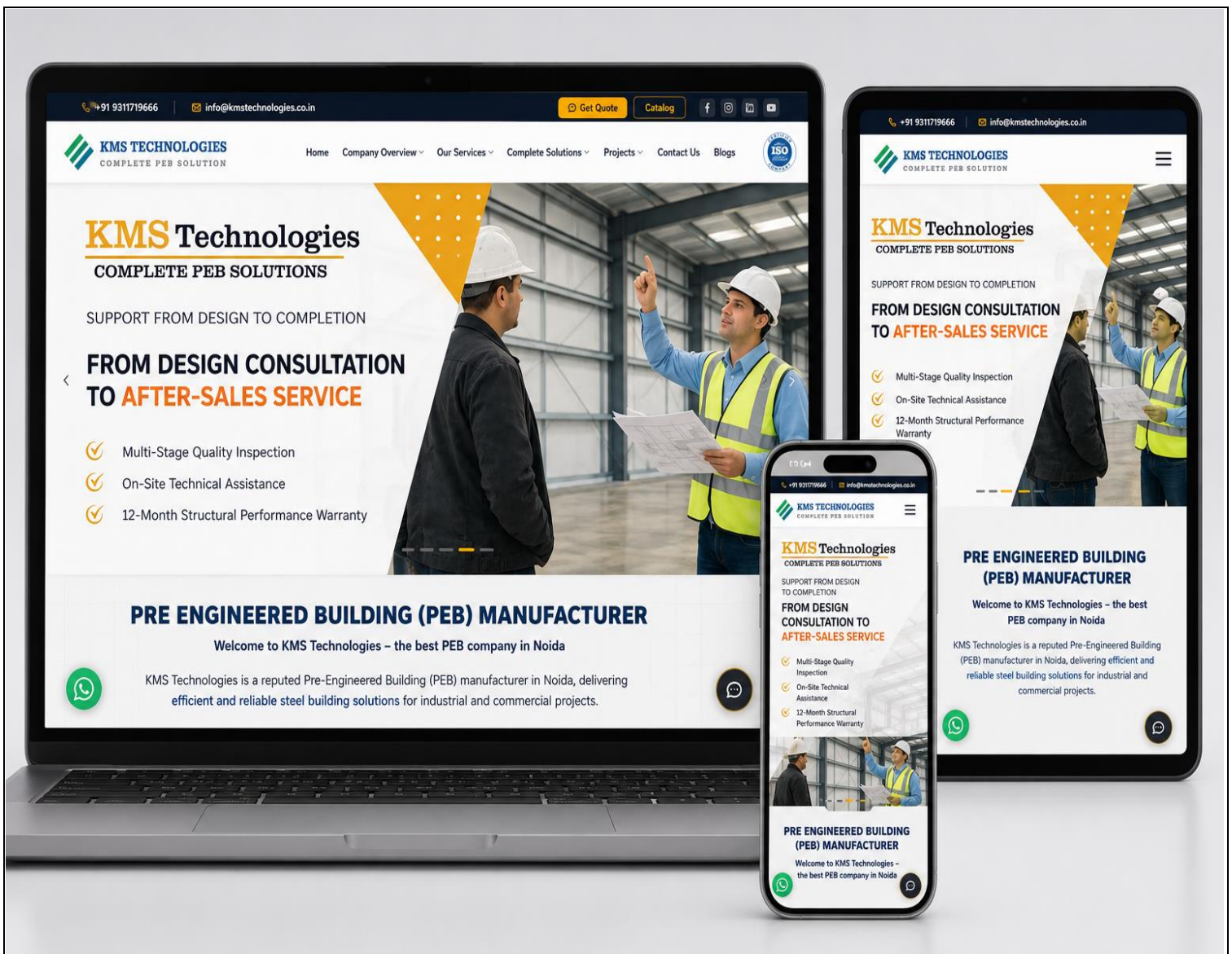
Chapter Summary

KMS Technologies is committed to delivering complete Pre-Engineered Building solutions that combine engineering excellence, precision manufacturing, quality assurance, and professional project execution. Our integrated approach ensures every project is completed efficiently, safely, and to the highest standards.

Whether you are planning a warehouse, factory, logistics center, aircraft hangar, cold storage facility, or commercial building, KMS Technologies provides the expertise and support to transform your vision into a reliable, high-performance structure.

KMS Technologies

Build Strong. Build Smart.



Contact Us

Let's Build the Future Together

Thank you for taking the time to explore our eBook on **Pre-Engineered Buildings (PEBs)**. We hope it has provided valuable insights into modern steel construction, industry best practices, and the comprehensive solutions offered by **KMS Technologies**.

Whether you are planning a new warehouse, factory, aircraft hangar, logistics center, cold storage facility, commercial building, or any other steel structure, our team is ready to help transform your vision into reality.

From concept and engineering to manufacturing, installation, and after-sales support, we are committed to delivering reliable, cost-effective, and high-quality PEB solutions that meet your business objectives.

Get in Touch

KMS Technologies

Complete Pre-Engineered Building Solutions



Office Address

Greater Noida, Uttar Pradesh, India



Website : www.kmstechnologies.co.in



Email : info@kmstechnologies.co.in



Phone : +91 9311719666

Our Services

- Pre-Engineered Buildings (PEB)
- Industrial Sheds
- Warehouses
- Factory Buildings
- Aircraft Hangars
- Cold Storage Buildings
- Logistics Centers
- Commercial Buildings
- Mezzanine Floors

- Structural Steel Fabrication
 - Roofing & Wall Cladding
 - PUF & Sandwich Panels
 - Turnkey PEB Solutions
 - Design, Manufacturing & Installation
-

Why Partner with KMS Technologies?

- ✓ End-to-End PEB Solutions
 - ✓ Customized Engineering
 - ✓ Modern Manufacturing Facility
 - ✓ High-Quality Materials
 - ✓ Strict Quality Assurance
 - ✓ Experienced Installation Teams
 - ✓ Timely Project Delivery
 - ✓ Competitive Pricing
 - ✓ Dedicated After-Sales Support
-

Let's Build Something Strong Together

Every successful project begins with the right partner.

Whether your project is large or small, our experienced engineering team is ready to deliver a solution that is innovative, efficient, and built to last.

Contact us today for a free consultation and customized project proposal.

Thank You

We appreciate your interest in [KMS Technologies](https://www.kmstechnologies.co.in).

We look forward to partnering with you on your next Pre-Engineered Building project.

KMS Technologies

Build Strong. Build Smart.

Connect With Us

 Greater Noida, Uttar Pradesh, India

 www.kmstechnologies.co.in

 info@kmstechnologies.co.in

 +91 9311719666

Engineering Excellence • Precision Manufacturing • Trusted Partnerships