Insulated Steel Structure Factory Building PEB Metal Workshop with Thermal Insulation Panels for Workshop Storage and Temperature Controlled Space

Our Product Introduction

Basic Information

- Place of Origin: Hebei,China
- Brand Name: BAODU
- Certification: ISO9001,CE
- Model Number: Steel Warehouse
- Minimum Order Quantity: 800square meters
- Price: USD26/square meter
- Packaging Details: In general, for steel structure , we use the steel frame packing to keep goods not to be broken . For sandwich panel and color steel sheet, we use the plastic packing . If the clients need special packing will according to their requirements.
- Delivery Time: 45 days
- Payment Terms: L/C,D/A,D/P,T/T,Western Union,
- Supply Ability: 10000 Square Meter/Square Meters per Month



Product Specification

- Product Name: Insulated Steel Structure Factory Building PEB Metal Workshop With Thermal Insulation Panels For Workshop Storage And Temperature Controlled Space
- Main Frame: Solid H-shape Steel Beam
- Material: Q355 Q235
- Processing Service: Bending, Welding, Decoiling, Cutting, Punching
- Application Fields: Warehouse, Factory, Steel Structure Building
- Surface Treatment: Hot Dip Galvanised Or Painted
- Design: Free Custom Design
- Project Solution Capability: Graphic Design, 3D Model Design, Total Solution For Projects, Cross Categories Consolidation
- Maximum Roof Load (lb./sq.ft): 20+lb/sq.ft
- Maximum Wind Resistance (mph): 121+mph

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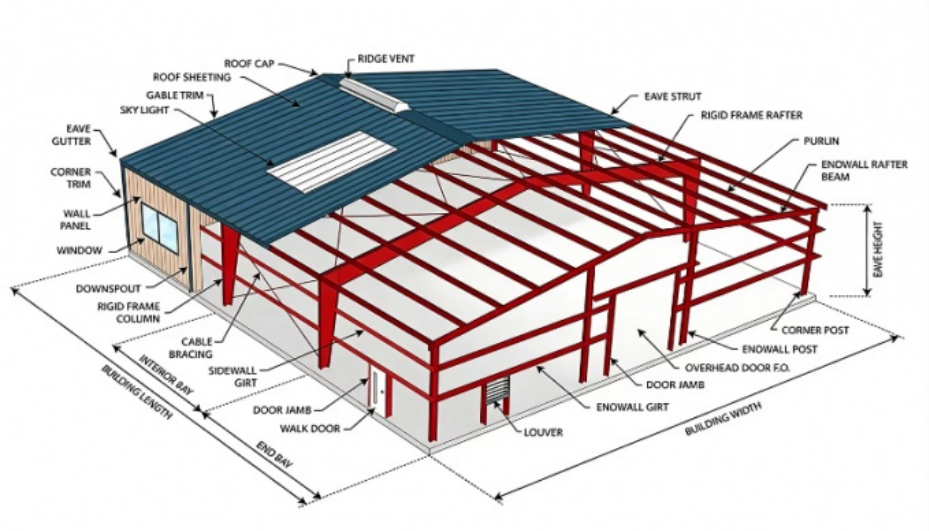
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Product Description

This insulated steel structure building combines a pre-engineered portal frame — hot-dip galvanized or painted H-section columns and rafters, bolted on site — with a fully insulated envelope of sandwich panels on both roof and walls. The result sits between a conventional warehouse and a refrigerated facility: it holds temperature within a defined band, controls condensation, reduces noise, and still delivers the span and clear height that industrial operations require.

The system is engineered for three overlapping uses. As a **workshop**, it keeps machine shops, assembly lines and painting areas at a stable temperature and shields operators from radiant heat. As a **storage building**, it protects goods sensitive to humidity swings — paper, packaging, electronics, textiles and food ingredients. As a **temperature controlled space**, it supports chilled or low-temperature operation where the envelope works together with refrigeration rather than against it.



Material & Construction Specifications

Main Structure

Component	Specifications
Column & Beam	Welded H-section steel, steel grade Q355B / Q235B
Column & Beam Connection	High-strength bolt
Column & Foundation Connection	Pre-embedded anchor bolt

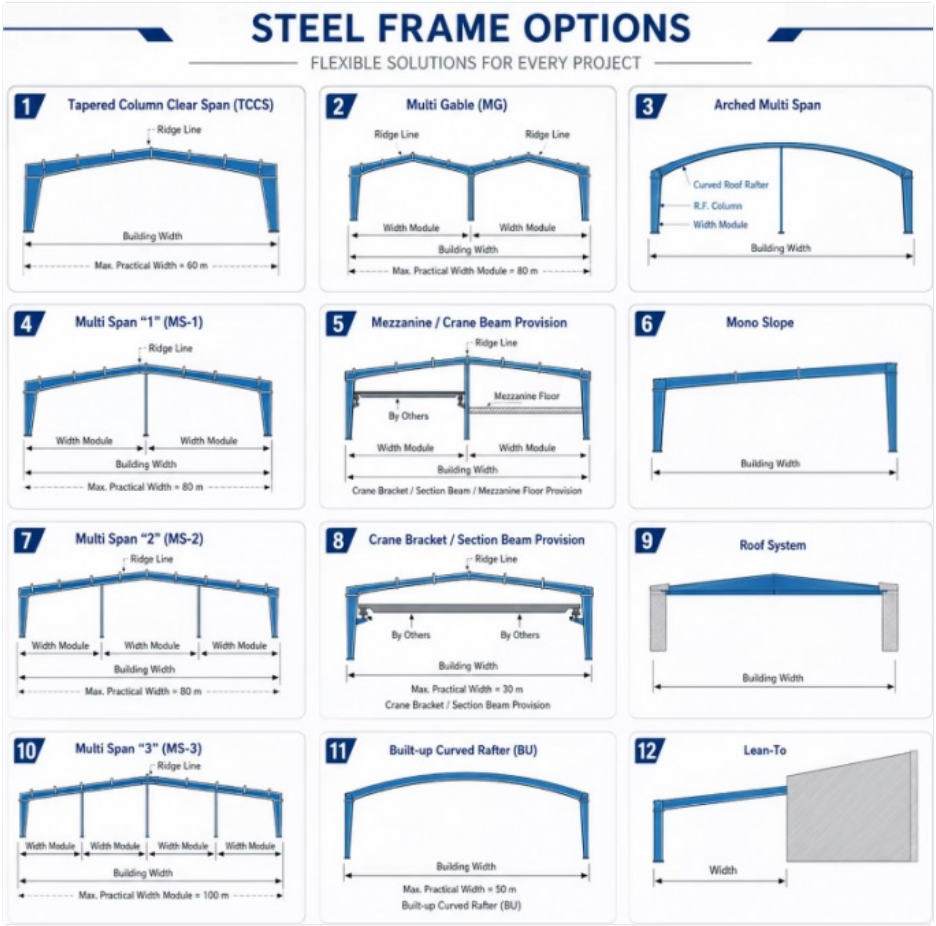
Secondary Structure

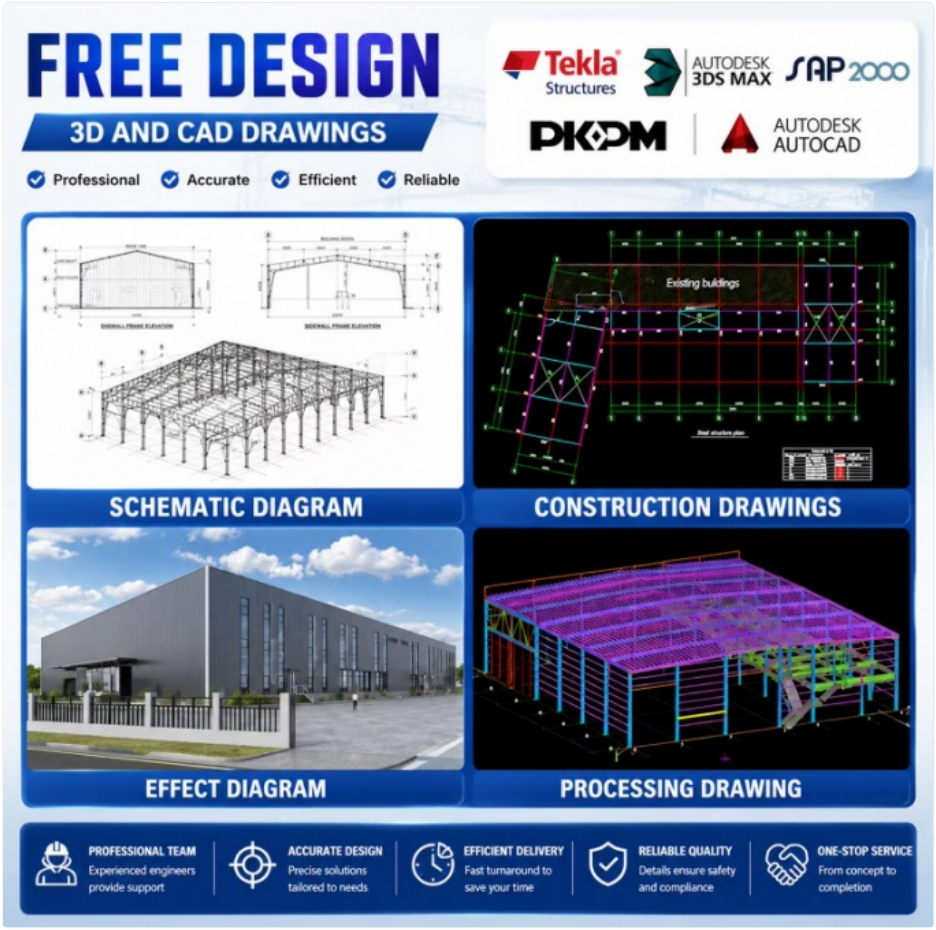
Component	Type
Roof Purlin & Wall Purlin	C-shape or Z-shape steel
Knee Brace	Angle steel
Brace	Steel rod
Tie Bar	Steel pipe

Wall & Roof Panel Options

Panel Type	Application Scenarios
Color Steel Sheet	Areas without winter; preferred for processing workshops and warehouses
Color Steel Sheet & Fiberglass Roll Insulation	Areas with winter but low temperature requirements; preferred for warehouses and workshops
Insulated Sandwich Panel	Workshops and warehouses with temperature requirements
PU Insulated Sandwich Panel	Workshops, warehouses and public facilities with high temperature requirements for the working environment

Technical Specifications





If you have drawings, welcome to share them with us and the quotation will be prepared based on your drawings. Our experienced design team will design the steel structure workshop or warehouse for you.

Required Information for Custom Design

Location (where will it be built?) — which country and which city?

Size: Length × width × eave height — _____mm × _____mm × _____mm

Wind load (max. wind speed): _____kN/m², _____km/h, _____m/s

Snow load (max. snow height): _____kN/m², _____mm, and temperature range?

Anti-earthquake level: _____

Brick wall needed or not? If yes, 1.2 m high, 1.5 m high, or other?

Thermal insulation: if yes, EPS, fiberglass wool or rock wool — PU sandwich panels will be suggested; if not, metal sheets are acceptable.

Door quantity & size: _____ units, _____(width)mm × _____(height)mm

Window quantity & size: _____ units, _____(width)mm × _____(height)mm

Crane needed or not? If yes, _____ units, max. lifting weight _____ tons; max. lifting height _____ m

Core Competitive Advantages

1. Proven Industrial Standard Structure, High Safety Reliability

The portal frame is the most widely accepted steel building system for single-storey industrial projects. Its rigid frame calculation model is mature and recognized by engineers globally. It performs well under strong wind, heavy snow and seismic events, making it suitable for long-term continuous industrial operation and high-value cargo storage.

2. Optimized Steel Consumption, Better Cost Performance

Variable-section haunch design optimizes steel distribution along the bending moment curve, avoiding material waste. The self-weight of the portal frame is lighter than heavy truss structures, which lowers foundation investment. For large-scale workshop and warehouse projects, it achieves a good balance between structural safety and total project budget.

3. Fast Construction Cycle, Early Return on Investment

Prefabrication shifts most fabrication work indoors. Once steel packages arrive on site, local teams can erect the portal frame rapidly.

Large-scale warehouses and workshops can be finished and put into service much faster than concrete buildings, helping clients start production and storage operations sooner.

4. Flexible Space for Production & Storage Integration

The wide open space can be divided into production zone, assembly zone, raw material storage and finished goods warehouse. It supports overhead crane installation for heavy part handling, making it a perfect fit for manufacturing enterprises that combine workshop and warehouse on one site.

5. Detachable, Recyclable & Low Maintenance

Bolt-connected portal frames can be disassembled, relocated and reassembled when business moves. Steel material is 100% recyclable. With proper anti-corrosion treatment, the main frame can serve 40–50 years with simple routine inspection, greatly cutting long-term maintenance expense.

Quality Assurance





Excellent product quality is our eternal pursuit and the fundamental reason we are established in the global market. BAODU GROUP implements whole-process quality management and strictly supervises every stage, including raw material supply, engineering design, steel component manufacturing, installation and construction.

We have established a professional team of quality inspection engineers, introduced internationally leading inspection equipment such as the German GS1000 vacuum spectrometer and high-frequency infrared carbon-sulfur analyzer, and set up a high-quality product inspection room. We have won numerous awards as an advanced quality management unit in China. In addition, we support testing and certification by SGS, TUV and BV.

Project Gallery















Use Case Configurations

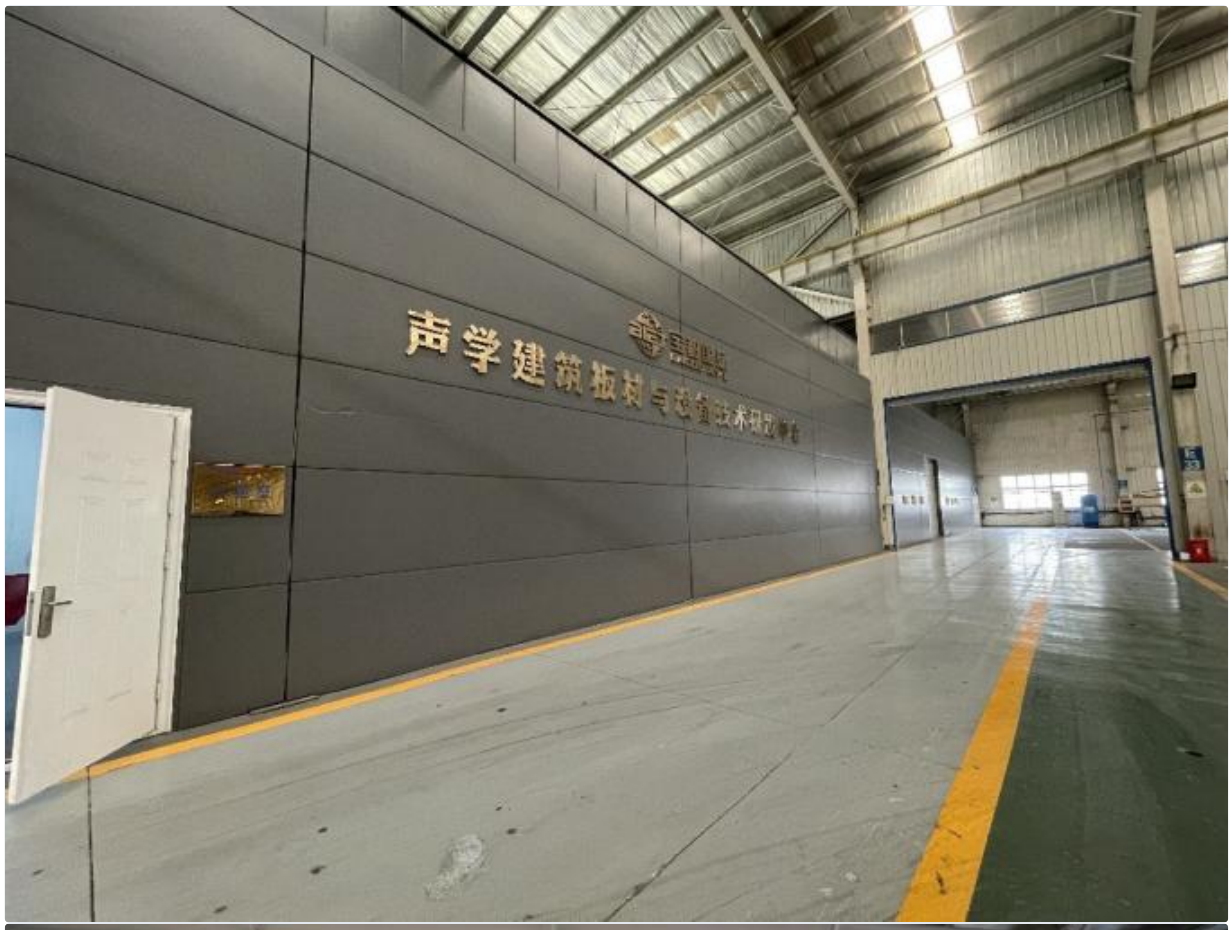
Use Case	Typical Configuration	Design Focus
Production workshop	Single or double span, 100 mm panels, mezzanine provision, service openings	Stable temperature, ventilation, noise
General storage	Multi-bay, 50–75 mm panels, wide insulated doors	Humidity control at low cost
Food and beverage processing	100–150 mm rock wool or PIR, hygienic lining, washable surfaces	Hygiene, fire class, condensation
Chilled or temperature controlled storage	100–150 mm PIR, sealed envelope, insulated door units, refrigeration interface	U-value, air-tightness, thermal bridges
Pharmaceutical and electronics storage	75–100 mm panels, tight humidity band, monitored openings	Stability, cleanliness, sealing
Cold-climate workshop	100–150 mm panels, insulated doors, roof snow detailing	Heat retention, snow load
Hot-climate workshop	75–100 mm panels, light-coloured roof, ventilation or evaporative cooling	Solar gain, roof temperature

Certifications & Manufacturing Capacity



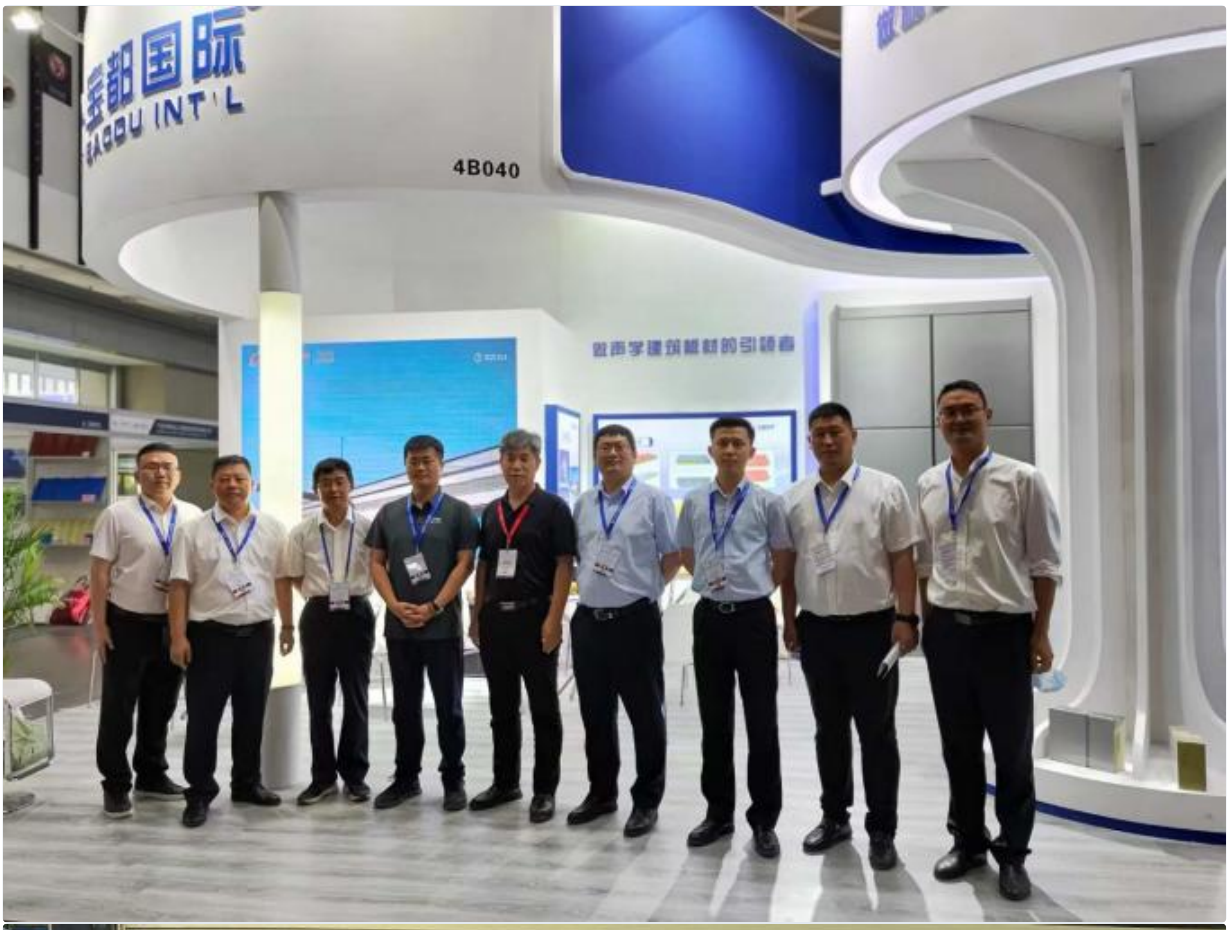








Technical Support & Services


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After many years of operation, BAODU Group has grown from strength to strength and made important contributions to the development of the construction and steel structure industries. We are trusted by builders and customers from all over the world.

Our Services Include:

- Consultations to help you determine the best solutions for your needs
- Customized design services to ensure the warehouse meets your specific requirements
- Quality control inspections throughout the production process
- On-site installation and assembly services
- Maintenance and repair services to keep your warehouse in top condition

Our goal is to provide customers with reliable, durable and cost-effective solutions for their storage needs.

Why Choose BAODU

Customized Design Solutions

The structures of customized buildings are flexible because different customers need different styles. We help customers design structures to meet individual requirements and provide free design services. We can also follow your drawings for arrangement.

Global Experience

We have many years of experience in steel structure building. Our prefabricated buildings have been exported to over 50 countries, where they are installed in a wide variety of geographical and climatic conditions. Through design and installation, we have accumulated extensive practical experience.

Quality Certifications

- SGS certification
- CE certification
- ISO certification
- OEM/ODM services
- Quality certification
- Design / technician / QA / QC support
- Professional customized solutions

Company Profile

Baodu International Advanced Construction Material Co., Ltd was established in January 2010, with its office in Beijing and factory in Hebei, China. Baodu is a designer, manufacturer, supplier and exporter of industrial noise comprehensive treatment, steel structure, sandwich panel and prefab house products.

Baodu has an annual output of 6 million square meters of acoustic sandwich panels, 100,000 tons of steel structures and 1 million square meters of floor decking sheet. Products are sold in more than 30 countries and regions around the world.

Baodu has a professional design team with more than 10 years of experience, including 5 senior engineers, 20 engineers and 35 technicians. Baodu holds several energy-saving and environmental protection intellectual property rights, construction and environmental protection design qualifications, CE certification and Russian GOST certification.

Baodu participated in the parade village project for the 60th anniversary of China and the Beijing Daxing International Airport project. Under the guidance of China's "One Belt, One Road" strategy, Baodu has also undertaken overseas projects such as the Thar coal-fired power plant project in Pakistan and the Hasyan power plant project in Dubai.

Packing & Shipping

Seaworthy Export Packaging

All goods ship disassembled. Frames are bundled by assembly group with serial marks matching the erection drawing; insulated panels are packed in protected stacks to keep edges and core intact; trims, sealant and fasteners are boxed with a per-container packing list.

Loading. 40HQ / 40GP or flat-rack containers, loaded by member length; panels stacked flat and braced.

Panel protection. Edges and corners protected against transit damage; panels kept dry and clear of standing water.

Marking. Bundle and member marks tie back to the drawing and packing list so unload order matches erection order.

Volume note. Insulated panels occupy noticeably more container volume than single-skin sheet, so loading plans are calculated per project rather than quoted as a fixed area per container.

Documents. Packing list, invoice, bill of lading, panel datasheets and requested certificates.




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