CE Portal Frame Prefab Steel Structure Workshop Warehouse Large Scale Metal Steel Frame Building Structure

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: Portal Frame Prefab Steel Structure Workshop Warehouse Large Scale Metal Steel Frame Building Structure
- Main Frame: Solid H-shape Steel Beam
- Material: Q345 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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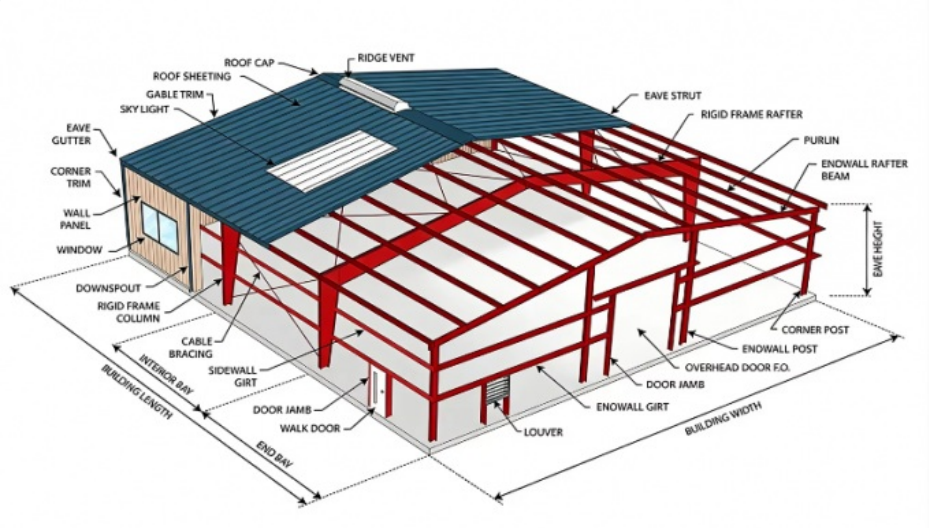
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Product Description

The CE portal frame prefabricated steel structure is the classic mainstream large-scale metal frame industrial building system, widely adopted for workshops, warehouses and heavy-duty industrial premises. Its core load-bearing system consists of rigid portal frames with moment-resisting haunch connections between steel columns and rafters. This design efficiently transfers roof, wind and snow loads to the foundation without dense intermediate supporting columns, creating a wide, unobstructed clear-span interior space.

All steel components — including H-beam portal frames, purlins, bracing systems and connecting parts — are fully prefabricated, cut, drilled and treated in our factory. On-site erection uses bolted assembly with no heavy on-site welding required. As a mature large-scale metal steel frame building structure, it balances structural rigidity, load capacity, construction speed and overall cost. It is ideal for mass production workshops, bulk storage warehouses, logistics hubs and large industrial park projects, and is fully compliant with international wind, snow and seismic design codes.



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

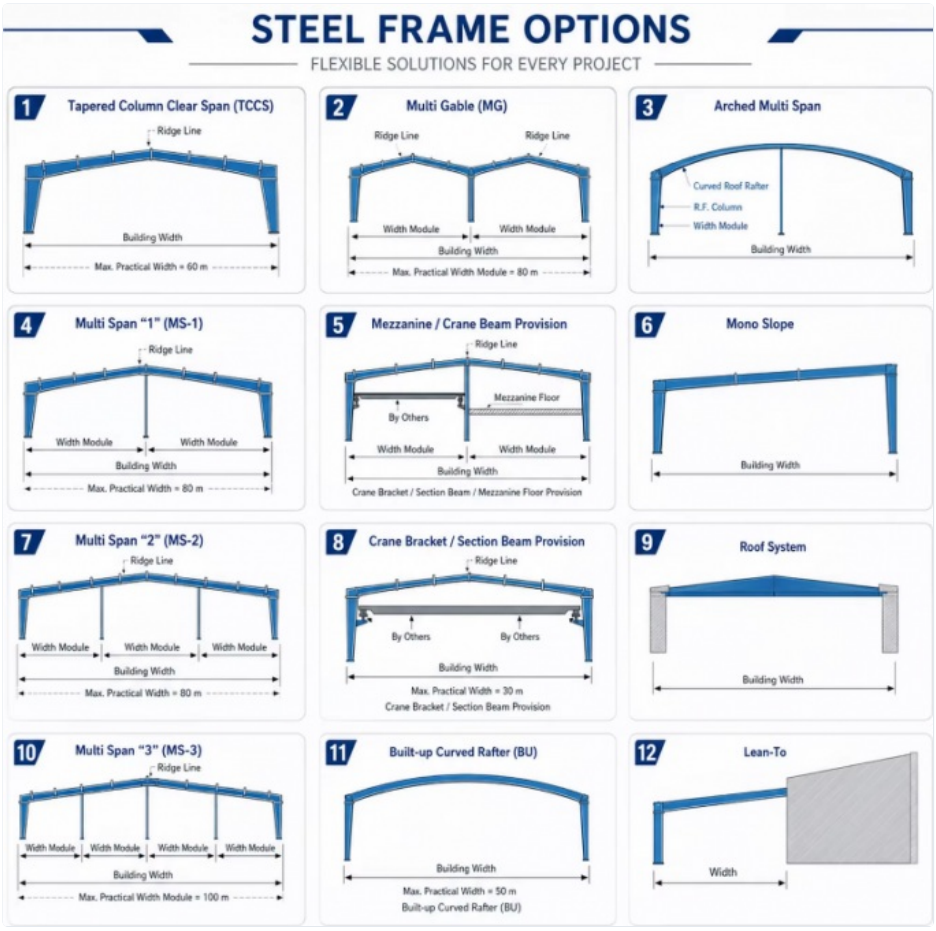
Secondary Structure

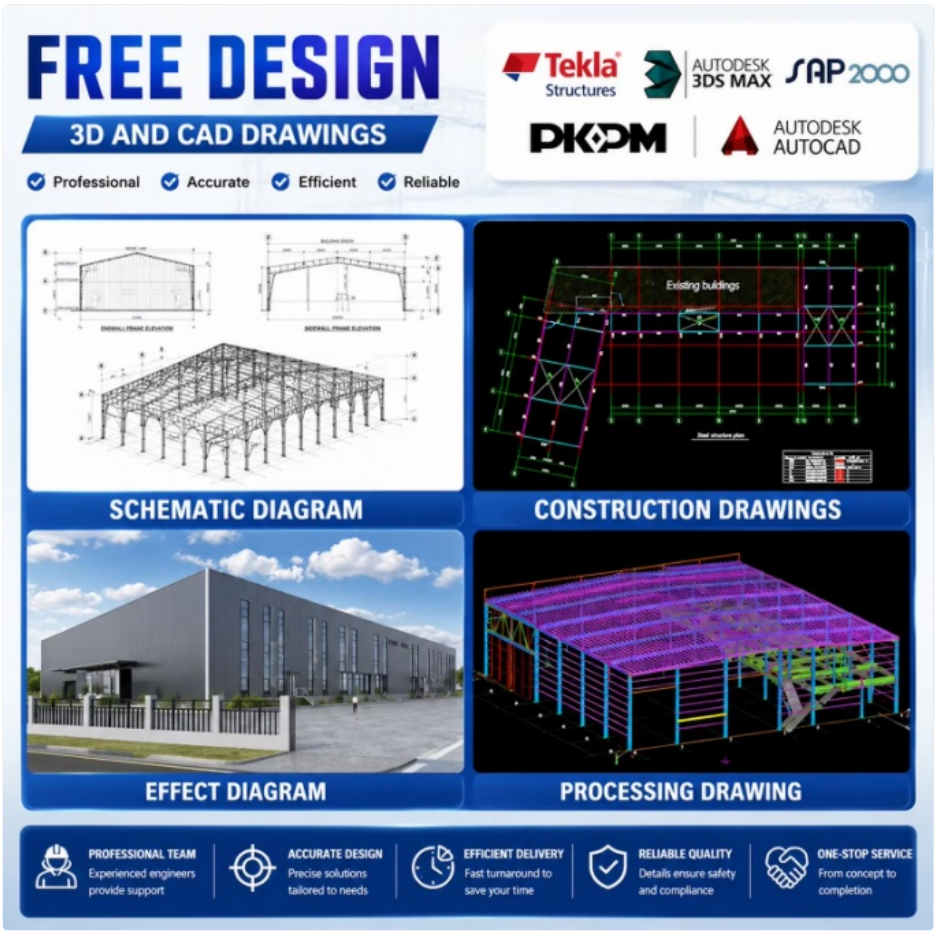
Component	Type
Roof Purlin & Wall Purlin	C-shape or Z-shape steel
Knee Brace	Angle steel
Brace	Steel rod
Tie Bar	Steel pipe

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















Industrial Storage Warehouse: factory raw material warehouse, finished product storage warehouse, mechanical parts stacking warehouse, heavy industrial goods storage building.

Logistics Storage Warehouse: large logistics distribution center, e-commerce storage base, cargo transit warehouse, bonded warehouse, third-party logistics storage station.

Large-Span Industrial Premise: light industrial production workshop, integrated production and storage workshop, equipment maintenance and storage integrated building.

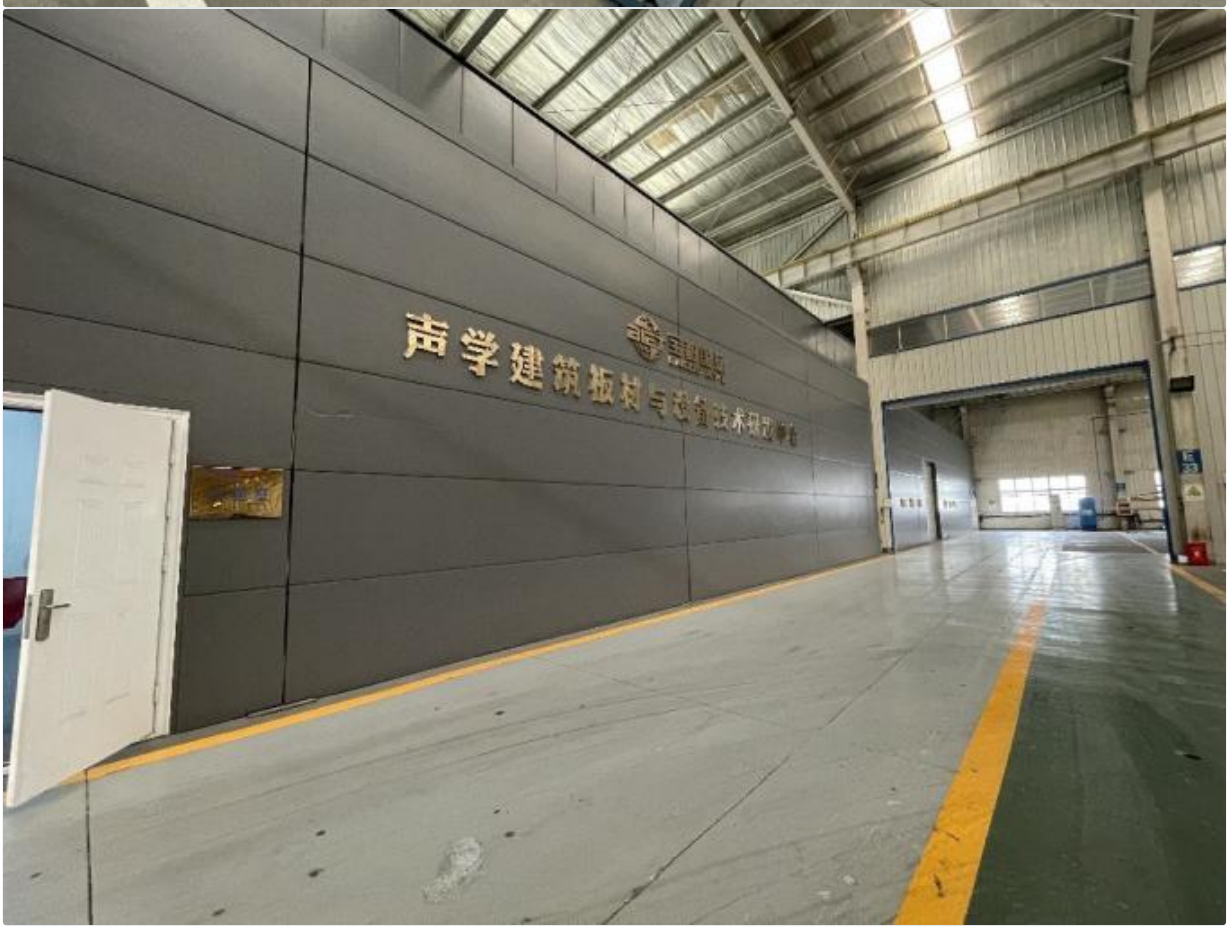
Public & Commercial Storage Facilities: industrial park standard warehouse, large material reserve warehouse, commercial goods centralized storage building.

Certifications & Manufacturing Capacity


降低成本是利润 跑冒滴漏是成本

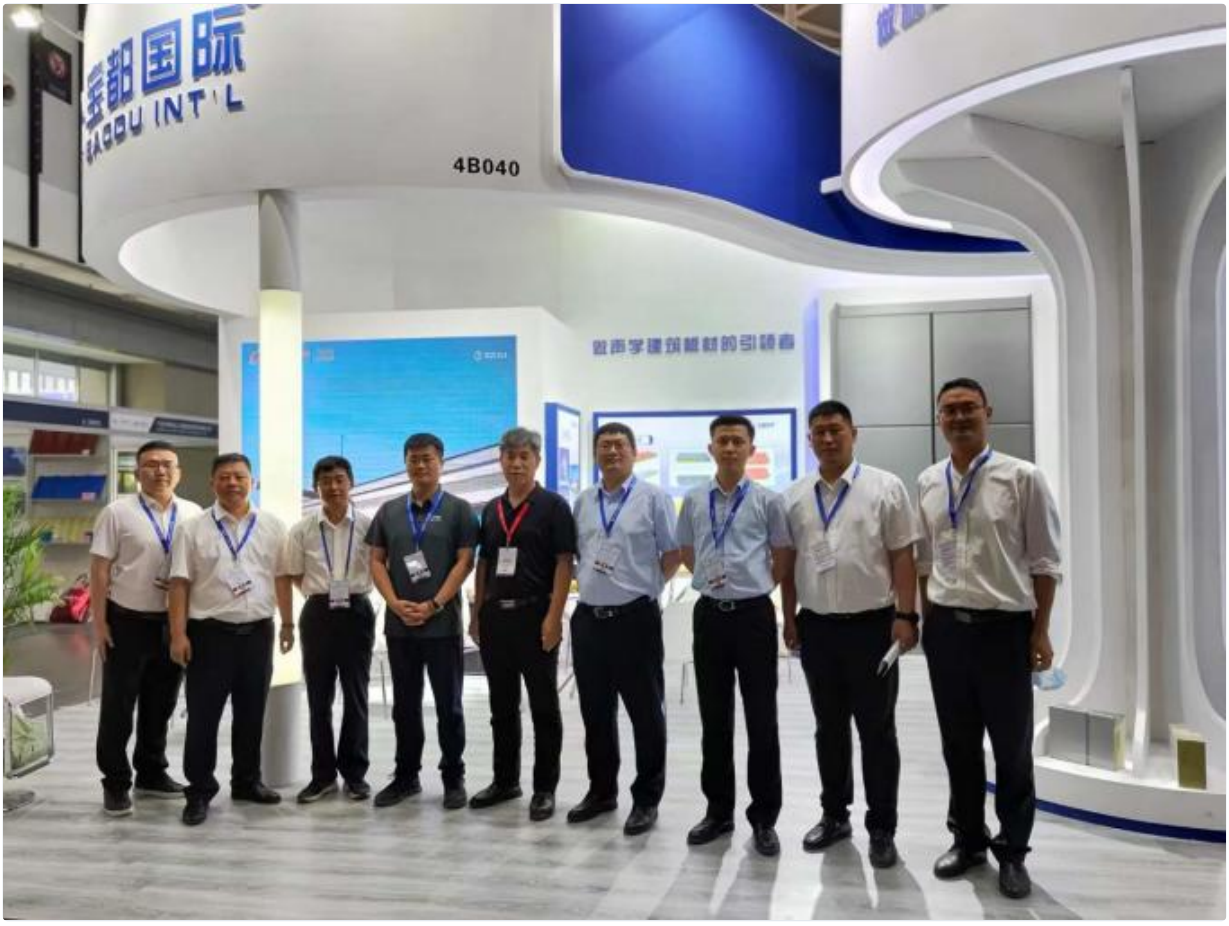





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Technical Support & Services




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BEIJING KEWEI JIANYE STEEL CO., LTD



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

Portal frame H-beams are bundled with high-strength steel straps and wrapped with waterproof woven cloth to protect the anti-corrosion coating. C/Z purlins and wall panels are packed with foam padding against scratches. Bolts, nuts, gaskets and small bracing fittings are sorted, labeled and packed in moisture-proof wooden cases. Every component is printed with a mark number matching the drawing list for easy sorting on site.

Containerized Flat Pack Shipment

All steel members are disassembled and flat packed to fit 20GP / 40GP / 40HQ containers. Our packing team arranges the loading layout to maximize container utilization and reduce ocean freight costs. We support FCL and LCL shipment, covering Southeast Asia, Africa, the Middle East, Europe, Latin America and Oceania.

Complete Technical & Customs Documents

We provide commercial invoice, packing list, bill of lading, steel mill test certificate, quality certificate, structural calculation sheet, general arrangement drawing, assembly drawing and English installation manual. All documents support overseas customs clearance and local project inspection and acceptance.

EXPORT PACKING & TRANSPORT

Safe Packing • Efficient Loading • Global Shipment

We provide professional export packing and transportation solutions to ensure your goods arrive safely and on time anywhere in the world.



Professional Lifting



Careful Loading



Secure Fixing



Ready for Shipment

EXPORT PROCESS



1 Storage



2 Loading



3 Fixing & Lashing



4 Inland Transport



5 Port Loading



6 Ocean Shipping



7 Destination Arrival

GLOBAL SHIPPING SOLUTIONS

MAERSK · msc · CMA CGM · COSCO SHIPPING 中远海运 · APL · EVERGREEN · HMM · ONE · ...and more



Secure Packing
Protect products from damage and corrosion

Standard Loading
Maximize space utilization

Strong Lashing
Ensure stability during ocean transport

Document Support
Professional export documentation

Tracking Service
Real-time tracking and updates


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