Rigid Frame Prefabricated Steel Structure Building Metal Workshop Warehouse for Food Processing Plant and Raw Material Storage Area

Our Product Introduction

Basic Information

- Place of Origin: Hebei,China
- Brand Name: BAODU
- Certification: ISO9001,CE
- Model Number: Steel Warehouse
- Minimum Order Quantity: 1000square meters
- Price: $25-30square 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: 21days
- 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: Rigid Frame Prefabricated Steel Structure Building Metal Workshop Warehouse For Food Processing Plant And Raw Material Storage Area
- Processing Service: Bending, Welding, Decoiling, Cutting, Punching
- Main Frame: Welded H Steel Beam, Steel Truss
- Life Span: Designed For 50 Years
- Dimensions: Customers' Requirement
- Main Material: Steel Structure Frames
- Project Solution Capability: Graphic Design, 3D Model Design, Total Solution For Projects, Cross Categories Consolidation, N/A, Others
- Design Style: Costom Requests
- Color: Customized Color
- Type: Steel Structure Frame
- Material: Q235/Q345/Q355

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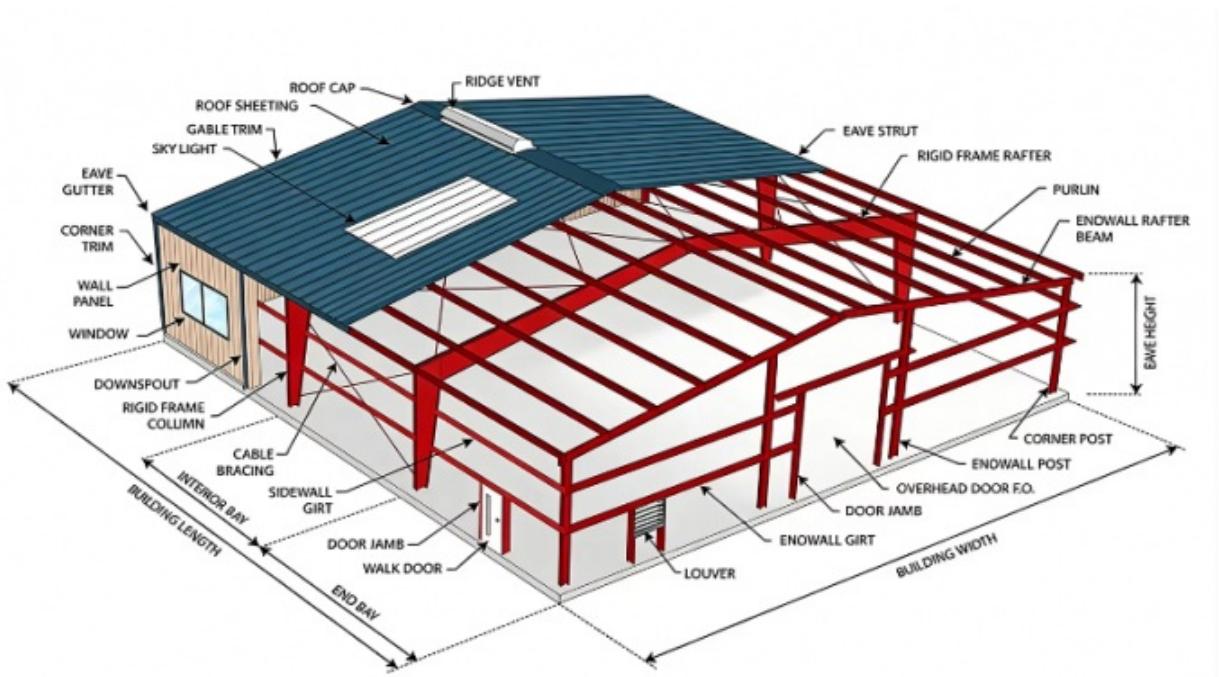
Product Description



Product Overview: Rigid Frame Prefabricated Steel Structure Building

The rigid frame prefabricated steel structure building is a hygienic, pre-engineered metal building solution specially developed for **food processing production lines and raw material storage zones**. Built on a rigid portal frame with H-section columns and rafters, it delivers stable structural rigidity, large clear-span interior space, and a flexible zoning layout.

Unlike ordinary industrial workshops, this series is optimized for food industry requirements: high humidity, frequent washing, sanitation control, temperature management, and pest prevention. Main steel members use Q235B / Q355B high-strength steel; all beams, columns, purlins, and bracing parts are CNC cut, pre-drilled, and pre-treated in the factory, then assembled on site with high-strength bolts. The layout is customized to separate the raw material receiving area, processing workshop, packaging room, finished goods storage, and auxiliary sanitation passage.

Core Product Features

Rigid Frame Stable Structure, Large Clear Sanitary Space: Rigid beam-column connections improve overall rigidity. Single or multi-span layouts with fewer intermediate columns accommodate food production equipment, conveyor lines, cleaning channels, and forklift circulation. The smooth open space reduces dead corners that are hard to clean and prone to breeding bacteria.

Hygienic Anti-Corrosion System for Wet & Washable Environments: Two anti-corrosion options are available: a heavy-duty food-grade anti-rust paint system or hot-dip galvanizing. Hot-dip galvanizing is strongly recommended for food workshops exposed to regular water washing, steam, and cleaning agents, resisting moisture, condensate, and weak corrosive detergents. Column base drainage design prevents water accumulation and rusting at the bottom.

Sanitary Insulated Enclosure Panel System: Smooth-faced insulated sandwich panels (PU / rock wool / PIR) are preferred for food zones. Seamless panel joint design, non-porous surfaces, easy washing and disinfection, and resistance to dust, mold, and odor absorption. Temperature-control panels can be configured for raw material cold storage areas, with normal-temperature panels for dry raw material warehouses.

Professional Ventilation, Condensation & Pest Control Design: Roof ventilators, fresh air intake, exhaust systems, and dehumidification structures are designed to reduce internal condensation. Reserved positions for insect-proof nets, airtight rolling doors, sealed windows, and drainage systems help control flies, rodents, and cross-contamination, meeting food factory sanitation requirements.

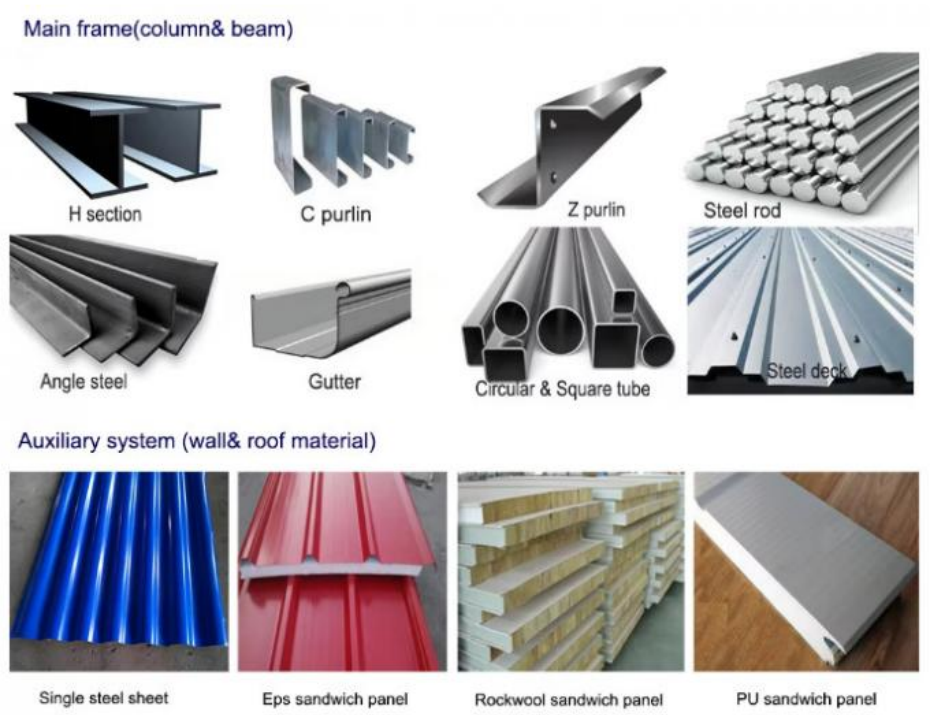
Functional Partition Customization for Food Production Flow: Independent zones are divided for raw material receiving, cleaning, processing, packaging, finished product storage, tool disinfection room, and changing room. Reserved openings accommodate water supply, drainage, sewage pipelines, purification air conditioning, and lighting systems. A light crane can be added for raw material handling after structural calculation.

Modular Prefabricated Bolt Assembly: All components are marked with unique codes. No massive field welding, reducing welding slag and dust pollution on site. This shortens the construction cycle and avoids long-term on-site construction pollution that threatens food safety.

Technical Specifications

Component	Material Specification
Size	Customized to Customer Requirements
Main Frame Column	Q235B (ASTM A36, S235JR), Q355B Welded or Hot-Rolled H-Section Steel
Main Frame Beam	Q235B, Q355B (ASTM A572, S355JR) Welded or Hot-Rolled H-Section Steel
Purlin	Q235B, C and Z Type Steel
Knee Brace	Q235B, Angle Steel
Tie Tube	Q235B, Circular Steel Pipe
Brace	Q235B, Round Bar or Angle Steel
Bracing	Q235B, Angle Steel, Round Bar or Steel Pipe
Roof & Wall Material	Metal sheet (PE + Galvanized + Aluminium), Sandwich Panel, Glass Wool
Door & Window	Rolling Up / Shutter Door, Sandwich Panel Door, Stainless Steel Door, Fireproof Door; PVC Window, Aluminium Window

Steel Materials



Technical Parameters

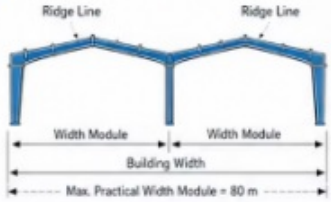
STEEL FRAME OPTIONS

FLEXIBLE SOLUTIONS FOR EVERY PROJECT

1 Tapered Column Clear Span (TCCS)



2 Multi Gable (MG)



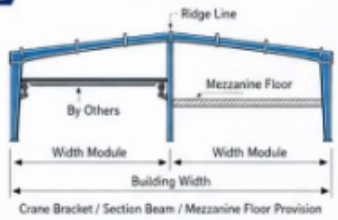
3 Arched Multi Span



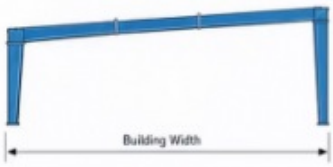
4 Multi Span "1" (MS-1)



5 Mezzanine / Crane Beam Provision



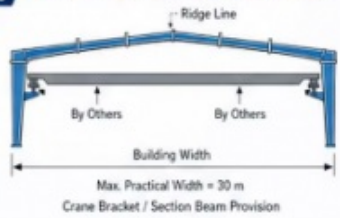
6 Mono Slope



7 Multi Span "2" (MS-2)



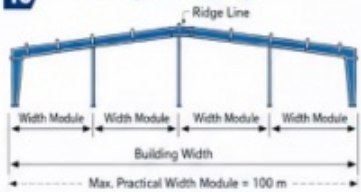
8 Crane Bracket / Section Beam Provision



9 Roof System



10 Multi Span "3" (MS-3)

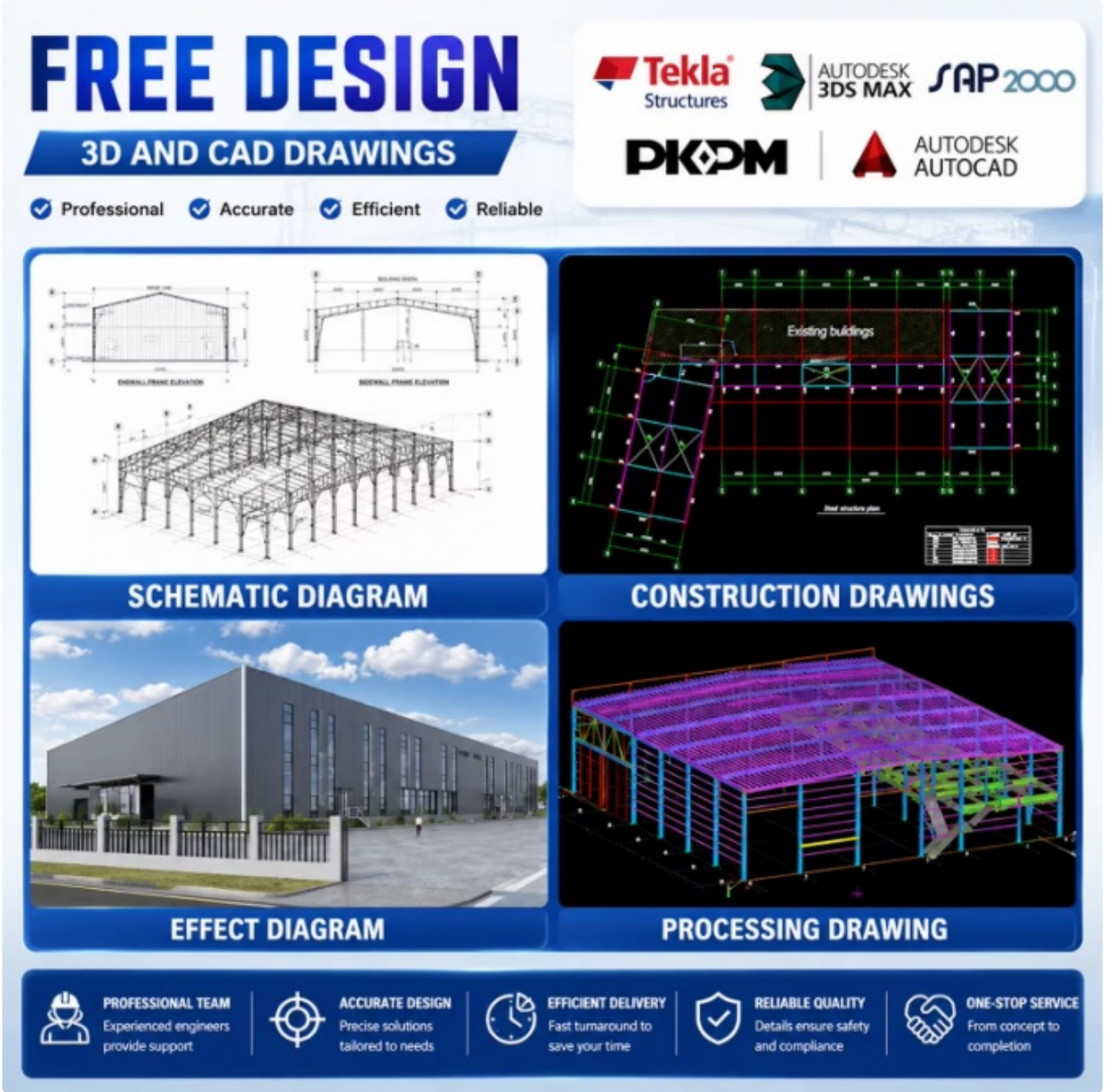


11 Built-up Curved Rafter (BU)



12 Lean-To





Applications









Food Processing Workshop: Fruit and vegetable processing plants, grain deep processing workshops, meat processing workshops, snack and bakery factories, beverage blending workshops, and central kitchens.

Food Raw Material Storage Area: Grain warehouses, frozen raw material storage, fresh agricultural product storage, spice and additive dry warehouses, and packaging material storage.

Food Auxiliary Zone: Raw material sorting rooms, cleaning and disinfection rooms, packaging workshops, and temporary finished goods buffer warehouses.

Small Integrated Food Factory: Combined plants with raw material receiving, processing, packaging, and storage.

Customization Options



Technical Support & Services




Projects in Mongolia
BAODU
FACTORY PRODUCTION LINE AND PACKING
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Professional installation and setup assistance

Comprehensive troubleshooting and technical guidance

Maintenance and care recommendations for longevity

Staff training for efficient warehouse utilization

Continuous support and consultation throughout the product lifespan

Packaging & Global Shipping



1. **Requirement Confirmation & Sanitary Design:** Confirm food type, production flow, raw material storage requirements, temperature control, local wind/snow/seismic loads, and sanitation and fire standards; provide drawings and quotation.
2. **Factory Fabrication, Anti-Corrosion Treatment & QC Inspection:** Steel cutting, welding, surface treatment, and dimension and coating inspection.
3. **Classification, Marking, and Seaworthy Packing.**
4. **Shipment and Handover:** Delivery of shipping and technical documents.
5. **Remote Online Technical Guidance** for the local erection team.

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