

Double Girder Overhead Crane: Heavy-Duty Lifting Solutions for Industrial Applications

Original link: <https://www.globalweihua.com/crane-hook/double-girder-overhead-crane/>

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Introduction to Double Girder Overhead Cranes

A double girder overhead crane is a robust material handling equipment designed to lift and transport heavy loads in industrial settings. Engineered with two parallel main girders, it delivers superior stability and load-bearing capacity compared to single girder models, making it the go-to choice for heavy-duty applications such as steel mills, manufacturing plants, warehouses, and construction sites. Whether you need to move machinery, raw materials, or finished products, our double girder overhead cranes combine precision, durability, and safety to optimize your workflow.

What is a Double Girder Overhead Crane?

A double girder overhead crane is a type of bridge crane consisting of two horizontal main girders supported by end trucks (or end carriages) that run along elevated rails (runways) mounted on building columns or standalone structures. The crane's lifting mechanism—typically a hoist or trolley—is mounted on a trolley that travels along the length of the main girders, allowing 360° coverage of the workspace below.

Unlike single girder cranes, which rely on a single main beam, double girder designs distribute weight more evenly, enabling them to handle much heavier loads (often up to 500 tons or more). This makes them essential for industries requiring frequent heavy lifting, where reliability and safety are non-negotiable.

Key Features of Double Girder Overhead Cranes

Our double girder overhead cranes are built to excel in demanding environments. Here are their standout features:

- **High Load Capacity:** Designed to handle heavy loads from 10 tons up to 500 tons, making them ideal for heavy-industry applications.

- **Superior Stability:** Two main girders distribute weight evenly, reducing sway and ensuring stable operation even with maximum loads.
- **Extended Span Options:** Available with spans from 10 meters to 35 meters, adaptable to large workspaces like warehouses or factory floors.
- **Precision Control:** Equipped with advanced hoisting and trolley mechanisms for smooth, accurate positioning of loads—critical for delicate or high-value materials.
- **Durable Construction:** Made from high-strength steel with anti-corrosion coatings, ensuring long-term performance in harsh conditions (e.g., high temperatures, dust, or moisture).
- **Enhanced Safety:** Integrated safety features include overload protection, emergency stop buttons, limit switches, and anti-collision devices to prevent accidents.
- **Customizable Design:** Can be tailored with optional extras like remote control, frequency inverters for variable speed, or specialized hooks for unique load types (e.g., coils, containers).

Technical Specifications

Parameter	Range/Details
Maximum Lifting Capacity	10 tons – 500 tons (custom options available for higher loads)
Span Length	10m – 35m (custom spans on request)
Lifting Height	6m – 30m (adjustable based on application)
Hoist Speed	0.5m/min – 10m/min (variable speed with frequency inverter option)
Trolley Travel Speed	5m/min – 30m/min
Crane Travel Speed	10m/min – 50m/min
Working Class	A5 – A8 (ISO standard; suitable for light to heavy-duty, continuous)
Power Supply	380V/3Ph/50Hz (customizable for 220V/440V or other regions)
Control Mode	Pendant control, remote control (wireless), or cabin control

Structure of a Double Girder Overhead Crane

A double girder overhead crane consists of several key components working together to ensure efficient lifting and movement:

1. **Main Girders:** Two parallel steel beams (girders) that form the bridge structure. They bear the load of the trolley and the lifted material, requiring high strength and rigidity.

2. **End Trucks (End Carriages):** Mounted at both ends of the main girders, these house the wheels and motors that drive the crane along the runway rails.
3. **Trolley:** A movable unit that travels along the top or bottom of the main girders. It carries the hoist and is powered by its own motor for horizontal movement.
4. **Hoist:** The lifting mechanism, including a drum, wire rope/cable, and hook. It is responsible for raising and lowering loads, with options for electric or hydraulic operation.
5. **Electrical System:** Includes motors, control panels, switches, and wiring to power and operate the crane, trolley, and hoist.
6. **Safety Devices:** Overload limiters, travel limit switches, emergency stop systems, and anti-sway devices to ensure safe operation.

FAQ: Double Girder Overhead Crane

Q1: What's the difference between a double girder and single girder overhead crane?

A: Double girder cranes have two main girders, offering higher load capacity (10+ tons) and stability, making them suitable for heavy-duty use. Single girder cranes have one main girder, are lighter, and better for lighter loads (up to 10 tons) in smaller workspaces.

Q2: Which industries use double girder overhead cranes?

A: They are widely used in steel mills, automotive manufacturing, shipyards, construction sites, warehouses (for heavy pallet handling), and power plants.

Q3: How often should a double girder overhead crane be maintained?

A: Routine inspections (daily checks for wear, lubrication) and professional maintenance (every 6–12 months) are recommended to ensure safety and longevity.

Q4: Can double girder cranes be customized for specific applications?

A: Yes. We offer customizations for load capacity, span, lifting height, control systems, and specialized attachments (e.g., magnets for metal handling, grabs for bulk materials).

Q5: Are double girder overhead cranes compliant with international safety standards?

A: Our cranes meet ISO, FEM, and OSHA standards, with built-in safety features to ensure compliance with global industrial regulations.

Ready to Elevate Your Lifting Operations?

Our double girder overhead cranes are engineered to boost productivity and safety in heavy-duty environments. Contact us today to discuss your requirements and get a tailored quote.

(注：文档部分内容可能由 AI 生成)