

6 Tons Overhead Crane

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6 Tons Overhead Crane: Reliable Heavy Lifting Solutions for Industrial Applications

When it comes to efficient, safe, and durable material handling in workshops, factories, or warehouses, a 6 tons overhead crane stands out as a versatile workhorse. Designed to handle

medium-duty lifting tasks with precision, this crane is engineered to streamline operations, reduce manual labor, and enhance productivity across a range of industries. Whether you're moving machinery, raw materials, or finished goods, our 6 tons overhead crane delivers consistent performance you can trust.

What Is a 6 Tons Overhead Crane?

A 6 tons overhead crane is a type of material handling equipment designed to lift and transport loads up to 6 tons (12,000 lbs) within a fixed workspace. Mounted on a runway system that runs along the ceiling or elevated beams, it operates horizontally (along the runway) and vertically (via a hoist), allowing for 360° coverage of the working area. This design eliminates floor obstruction, maximizing usable space—critical for busy industrial environments.

Key Features of Our 6 Tons Overhead Crane

Our 6 tons overhead crane is built with industry-leading standards to ensure reliability, safety, and long-term performance. Here's what sets it apart:

- **High-Strength Construction:** Crafted from premium grade steel, the crane's bridge, end trucks, and hoist are engineered to withstand heavy loads and frequent use without deformation. This ensures a longer service life, even in harsh industrial conditions.
- **Efficient Hoist System:** Equipped with a high-performance [electric hoist](#), the crane offers smooth lifting and lowering operations with precise speed control (variable speed options available). The hoist is designed for low noise and minimal energy consumption, reducing operational costs.
- **Advanced Safety Features:** Safety is non-negotiable. Our 6 tons overhead crane includes overload protection (prevents lifting beyond 6 tons), limit switches (stops hoist at upper/lower limits), emergency stop buttons, and anti-collision devices (for multi-crane setups). All components meet international safety standards (ISO, CE).
- **Easy Installation & Maintenance:** Designed for hassle-free setup, the crane's modular components simplify installation, even in existing facilities. Maintenance is straightforward, with accessible parts and clear service guidelines to minimize downtime.
- **Customizable Options:** We understand every workspace is unique. Choose from [single girder overhead crane](#) or [double girder overhead crane](#) designs, varying span lengths (8m to 30m), and additional features like remote control (wireless or pendant), dust-proof enclosures, or corrosion-resistant coatings for outdoor use.

6 Tons Overhead Crane: Composition & Key Lifting System

Basic Composition of 6 Tons Overhead Crane

A standard 6 tons overhead crane consists of four core components, working together to achieve stable and efficient material handling:

- **Main Girder:** The primary load-bearing structure, made of high-strength welded steel beams. It connects the end beams and supports the lifting trolley, ensuring even load distribution during operation.
- **End Beams:** Installed at both ends of the main girder, they house the bridge travel mechanism. End beams are designed to fit the runway rails, enabling the crane to move horizontally along the workshop ceiling.
- **Travel Mechanism:** Composed of motors, reducers, and wheels. The bridge travel mechanism drives the entire crane along the runway, while the trolley travel mechanism moves the hoist horizontally across the main girder.
- **Lifting System:** The core part responsible for vertical load movement—centered on the **6 tons electric hoist**, which is the key to realizing precise lifting and lowering.

Focus: 6 Tons Electric Hoist (Lifting System Core)

The 6 tons electric hoist is the "power heart" of the overhead crane, engineered for reliable medium-duty lifting. Its design integrates advanced technology to balance performance, safety, and durability.

Core Components of 6 Tons Electric Hoist

- **High-Efficiency Motor:** Equipped with a 3-phase asynchronous motor with class F insulation. It delivers strong torque for smooth starting and stable operation, with energy efficiency up to IE3 standard, reducing power consumption by 15-20% compared to conventional motors.
- **Hardened Gear Reducer:** Adopts helical gear transmission for low noise ($\leq 75\text{dB}$) and high transmission efficiency ($\geq 95\%$). Gears are carburized and quenched to HRC58-62 hardness, ensuring long service life even under frequent load changes.
- **Heavy-Duty Drum & Wire Rope:** The drum is made of seamless steel pipe with a grooved surface to prevent rope slipping. The wire rope uses $6 \times 37 + \text{FC}$ high-strength steel, with a breaking force $\geq 120\text{kN}$, ensuring safe lifting of 6-ton loads without deformation.
- **Dual-Brake System:** Combines a mechanical disc brake and an electromagnetic brake. The electromagnetic brake acts as the main brake for instant stopping, while the disc brake serves as a backup, eliminating the risk of load falling due to single brake failure.

Performance Advantages of the Lifting System

- **Precise Speed Control:** Supports variable lifting speeds (0.8-8 m/min) and trolley speeds (5-15 m/min). Slow speed mode (0.8-2 m/min) is ideal for positioning fragile or heavy loads, reducing collision risks.

- **Low Maintenance Design:** Sealed bearing units and lubrication-free components minimize maintenance frequency. The hoist’s detachable cover allows easy access to internal parts for inspection or repair, cutting downtime by 30%.
- **Wide Adaptability:** Available in standard, dust-proof, and corrosion-resistant versions. The dust-proof hoist is suitable for workshops with metal chips or powder, while the corrosion-resistant one works in humid or outdoor environments (e.g., coastal factories).

Safety Design of 6 Tons Electric Hoist

In line with ISO and CE safety standards, the electric hoist is equipped with multiple protection measures:

- **Overload limiter:** Automatically cuts off the lifting circuit when the load exceeds 110% of the rated capacity (6.6 tons).
- **Upper/lower limit switches:** Stop the hoist when the hook reaches the maximum or minimum lifting height, preventing overwinding or overlowering.
- **Emergency stop function:** Integrates with the crane’s main emergency button, enabling immediate shutdown of the hoist in case of emergencies.

Applications: Where a 6 Tons Overhead Crane Excels

The 6 tons overhead crane is ideal for medium-duty lifting needs across diverse industries:

- **Manufacturing Facilities:** Move machine parts, molds, or assemblies on production lines.
- **Warehouses & Logistics:** Load/unload pallets, stack goods, or transfer inventory efficiently.
- **Automotive Workshops:** Lift engines, chassis, or heavy components during assembly or repair.
- **Metalworking & Fabrication:** Handle steel plates, pipes, or welded structures safely.
- **Construction Yards:** Transport building materials in enclosed or semi-enclosed work zones.
- **Food & Beverage Industry:** Move bulk ingredients or packaged goods in hygienic settings (with food-grade modifications).

Technical Specifications

Parameter	Details
Rated Lifting Capacity	6 tons (6,000 kg)
Crane Type	Single-girder or double-girder available

Span Length	8m – 30m (customizable)
Lifting Height	6m – 20m (adjustable)
Lifting Speed	0.8 – 8 m/min (variable options)
Travel Speed (Bridge)	10 – 30 m/min
Travel Speed (Trolley)	5 – 15 m/min
Power Supply	380V/3PH/50Hz (customizable for regions)
Working Class	A5 – A6 (suitable for frequent use)

Why Choose Our 6 Tons Overhead Crane?

- **Proven Quality:** Backed by 20+ years of experience in crane manufacturing, our products undergo rigorous testing to ensure durability and performance.
- **Compliance:** All cranes meet international standards (ISO 9001, CE, FEM), ensuring compatibility with global industrial regulations.
- **Tailored Solutions:** Our team works with you to design a crane that fits your workspace, load requirements, and budget.
- **Comprehensive Support:** From pre-sales consultation to installation, training, and after-sales service, we’ re with you every step of the way.

Ready to enhance your material handling efficiency with a reliable 6 ton overhead crane? Contact us today for a free quote, technical advice, or to discuss your custom requirements. Let’ s build a solution that lifts your operations to the next level.

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