

Grab Bucket Overhead Crane: High-Efficiency Bulk Material Handling Solution

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A **Grab Bucket Overhead Crane** is a specialized material handling machine designed to streamline the grabbing, lifting, and transportation of bulk materials like coal, ore, grain, sand, and gravel. As a critical piece of equipment in industrial and mining operations, this crane combines the stability of an overhead bridge structure with the powerful gripping force of a grab bucket—making it ideal for businesses seeking to boost productivity, cut labor costs, and ensure safe bulk material movement. Whether you're operating in a mine, power plant, port, or construction site, a high-quality Grab Bucket Overhead Crane delivers consistent performance for heavy-duty material handling tasks.

Key Features of Our Grab Bucket Overhead Crane

Our Grab Bucket Overhead Crane is engineered with industrial-grade components to meet the demands of harsh working environments. Here are its standout features:

- **High-Strength Main Beam:** Constructed from premium Q355B steel using welding forming technology, the main beam undergoes strict flaw detection to ensure exceptional load-bearing capacity and fatigue resistance. Its optimized box-type structure reduces self-weight while maintaining rigidity, enabling stable operation even under maximum rated loads.
- **Wear-Resistant Grab Bucket:** Available in clamshell, orange-peel, and bulk grab designs to match different material properties. The bucket body is made of Mn13 wear-resistant manganese steel, significantly extending service life. The opening/closing mechanism uses a high-torque hydraulic cylinder or planetary reducer for smooth, reliable grabbing action.
- **Precision Frequency Conversion Control:** The lifting mechanism features a high-efficiency motor and hard-tooth surface reducer for strong power and stable speed regulation. The bridge and trolley traveling systems use frequency conversion (VFD) for smooth starts/stops, minimizing impact on the crane structure and materials. Anti-derailment devices are standard on all running gears.
- **Advanced PLC Electrical System:** Equipped with Siemens/Mitsubishi PLC and a user-friendly HMI for intuitive operation and real-time monitoring. Integrated safety functions include overload protection, limit switches, emergency stop, and fault diagnosis—enhancing overall safety and equipment reliability. Optional wireless remote control allows operators to work from a safe distance.

Grab Bucket Overhead Crane Technical Specifications

Parameter	Specification
Rated Lifting Capacity	5-50 t
Span	10-30 m
Lifting Height	6-20 m
Lifting Speed	0.8-10 m/min (VFD adjustable)
Trolley Traveling Speed	5-30 m/min
Crane Traveling Speed	10-45 m/min
Working Class	A5-A7
Power Supply	380V/50Hz/3Ph (customizable for global markets)

Top Applications of Grab Bucket Overhead Cranes

Grab Bucket Overhead Cranes are versatile and widely used across industries that handle bulk materials. Common applications include:

- **Mining & Mineral Processing:** Loading/unloading ore, coal, and minerals in mines and beneficiation plants.
- **Power Generation:** Handling coal in thermal power plant coal yards and feeding boilers.
- **Ports & Terminals:** Transferring bulk cargo (grain, fertilizer, cement) between ships, trains, and warehouses.
- **Construction:** Moving sand, gravel, and concrete aggregates at construction sites.
- **Metallurgy:** Handling iron ore, coke, and scrap metal in steel mills.
- **Chemical Industry:** Transporting non-corrosive bulk chemicals (with optional anti-corrosion upgrades).

Why Choose Our Grab Bucket Overhead Crane?

- **SEO-Optimized Efficiency:** Our Grab Bucket Overhead Crane boosts material handling speed by up to 50% compared to manual operations, reducing downtime and increasing throughput.
- **Cost-Saving Design:** Durable components minimize maintenance costs, while labor reduction and material loss prevention deliver long-term ROI.

- **Customizable for Your Needs:** Choose from various grab bucket types and tailor specifications (span, lifting height, capacity) to match your unique workflow.
- **Industrial-Grade Safety:** Multiple protection systems (overload, limit, emergency stop) ensure compliance with global safety standards (ISO, CE).
- **Easy to Operate & Maintain:** Intuitive PLC control and modular design simplify operation and reduce repair time.

Safety & Compliance for Grab Bucket Overhead Cranes

Safety is paramount in our crane design. Our Grab Bucket Overhead Crane meets international safety standards with:

1. **Overload Limiter:** Automatically cuts lifting power when loads exceed rated capacity.
2. **Travel Limit Switches:** Prevents overtravel of the bridge, trolley, and hoist.
3. **Emergency Stop Function:** Accessible buttons on the crane and remote control for immediate shutdown.
4. **Weatherproof Electricals:** IP54-rated electrical components for dust and water resistance.
5. **Safety Locks:** Grab bucket safety locks prevent accidental opening during lifting.

After-Sales Support for Your Grab Bucket Overhead Crane

We provide end-to-end support to keep your Grab Bucket Overhead Crane running smoothly:

- **On-Site Installation & Commissioning:** Professional technicians ensure proper setup and calibration.
- **Operator Training:** Hands-on training for safe and efficient crane operation.
- **12-Month Warranty:** Covers manufacturing defects (excluding wear parts) with free part replacement.
- **Global Spare Parts Supply:** Fast delivery of genuine spare parts to minimize downtime.
- **Preventive Maintenance:** Customized maintenance plans to extend crane lifespan.

What is a grab bucket used for?

A grab bucket is a specialized attachment designed for efficiently grabbing, holding, and releasing bulk materials. It works in tandem with equipment like [overhead cranes](#) to streamline material handling processes across various industries. Its key function is to securely grip different types of bulk goods—such as coal, ore, grain, sand, gravel, and non-corrosive chemicals—eliminating the need for manual loading or unloading. Different grab bucket designs (clamshell, orange-peel, bulk grab) are tailored to specific material properties: clamshell grabs excel at fine or powdery materials, orange-peel grabs handle irregular items

like scrap metal, and bulk grabs are ideal for dense, heavy materials. By providing a reliable and efficient way to move large quantities of bulk materials, grab buckets significantly boost operational productivity and reduce labor intensity.

FAQs About Grab Bucket Overhead Cranes

Q1: What materials can a Grab Bucket Overhead Crane handle?

A: It's designed for bulk materials like coal, ore, grain, sand, gravel, and non-corrosive chemicals.

Q2: How to choose the right grab bucket type?

A: Clamshell for fine materials (grain), orange-peel for irregular materials (scrap), bulk grab for dense materials (ore).

Q3: Does the crane comply with CE/ISO standards?

A: Yes, all our cranes meet CE, ISO, and local safety regulations.

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