

Underslung Overhead Crane - Product Detail Introduction

Original link: <https://www.globalweihua.com/products/overhead-crane/underslung-overhead-crane/>



Product Overview

The underslung overhead crane, also known as an underhung overhead crane, is a specialized material handling equipment designed to operate on the lower flanges of existing building roof beams or dedicated runways. Unlike top-running overhead cranes that run on top of the rails, this **high-efficiency underslung overhead crane** is suspended from the rails, making it an

ideal solution for facilities where headroom is limited or where utilizing the existing structural framework can optimize space and cost. It is widely used in various industries for lifting, moving, and positioning heavy loads with high efficiency and precision.

Core Value of Underslung Overhead Crane

This type of crane stands out for its ability to adapt to constrained spaces, which is why many businesses prefer the *space-saving underslung overhead crane* for their material handling operations. It not only enhances workflow efficiency but also reduces the need for extensive structural modifications in existing facilities.

Lightweight & Durable Traits of Underslung Overhead Crane

- **Compact Design:** The underslung overhead crane features a compact structure with its main components (such as the bridge girder, hoist, and trolley) suspended below the rails. This design of the **lightweight underslung overhead crane** significantly reduces the required headroom, allowing for maximum utilization of the vertical space in the workshop.
- **Lightweight yet Durable Construction:** Constructed with high-quality steel materials, the crane balances lightweight properties with exceptional durability. The bridge girder of the *durable underslung overhead crane* is often designed with a box-type or I-beam structure, ensuring strong load-bearing capacity while minimizing the overall weight to reduce the stress on the building's structural beams.
- **Flexible Trolley System:** The trolley, which carries the hoist, operates smoothly along the bridge girder. It is equipped with high-precision wheels and bearings, ensuring low friction and stable movement even when the **underslung overhead crane** is handling heavy loads. The trolley can be customized with different speeds to meet specific operational requirements.
- **Efficient Hoist Unit:** The hoist is the core lifting component, available in [electric chain hoist](#) or wire rope hoist configurations. For the *high-performance underslung overhead crane*, it is designed for reliable performance, with features such as variable speed control, overload protection, and emergency stop functions to ensure safe and efficient lifting operations.

Working Principle

The underslung overhead crane operates through a combination of three main movements: lifting, traversing (along the bridge), and traveling (along the runways). First, the hoist of the **underslung overhead crane** is activated to lift the load by winding the chain or wire rope. Once the load is lifted to the desired height, the trolley moves along the bridge girder to position the load horizontally within the span of the crane. Simultaneously, the entire bridge structure travels along the suspended runways to move the load between different areas of the workshop. All movements of the *easy-control underslung overhead crane* are controlled by a

pendant control station, wireless remote control, or integrated into the factory's central control system, ensuring precise and convenient operation.

Industry-Specific Underslung Overhead Crane Applications

Due to its space-saving design and reliable performance, the underslung overhead crane is widely applied in the following industries:

- 1. Manufacturing Industry:** The **underslung overhead crane for manufacturing** is used in automotive, machinery, electronics, and appliance manufacturing plants for assembling components, moving workpieces between production lines, and loading/unloading materials.
- 2. Warehousing and Logistics:** The *underslung overhead crane for warehousing* is ideal for warehouses with limited headroom to stack and retrieve goods, load and unload trucks, and optimize storage space utilization.
- 3. Workshops and Maintenance Facilities:** Utilized in maintenance workshops for lifting and repairing heavy equipment, such as motors, pumps, and machinery parts, the **maintenance-friendly underslung overhead crane** simplifies daily operations.
- 4. Construction Industry:** Employed in prefabricated concrete plants, steel structure workshops, and construction sites (indoor or covered areas) for handling building materials like steel bars, concrete components, and prefabricated parts, the *heavy-duty underslung overhead crane* meets tough working demands.
- 5. Power and Energy Sector:** Used in power plants, transformer stations, and renewable energy facilities for installing and maintaining equipment such as generators, transformers, and wind turbine components, the **precision underslung overhead crane** ensures safe and accurate load handling.

Technical Parameters

Parameter	Specification Range
Lifting Capacity	0.5t - 50t
Span Length	3m - 30m
Lifting Height	3m - 20m (customizable)
Lifting Speed	0.8m/min - 16m/min (variable speed optional)
Trolley Travel Speed	10m/min - 40m/min
Bridge Travel Speed	15m/min - 60m/min

Safety Features

Safety is a top priority in the design and operation of underslung overhead cranes. The following safety features are integrated to ensure secure working conditions:

- **Overload protection device:** Automatically stops the lifting operation when the load exceeds the rated capacity to prevent structural damage and accidents.
- **Emergency stop button:** Easily accessible on the control station and crane body to immediately halt all movements in case of emergencies.
- **Limit switches:** Include upper and lower limit switches for the hoist (to prevent overwinding and overlowering) and travel limit switches for the trolley and bridge (to prevent collision with end stops).
- **Anti-collision device:** Optional for multiple cranes operating on the same runways, preventing collisions between cranes.
- **Voltage protection:** Protects the electrical system from voltage fluctuations and overloads.
- **Warning devices:** Such as audible alarms and warning lights to alert personnel when the crane is in operation.

Why Choose Our Underslung Overhead Crane

Choosing an underslung overhead crane offers numerous advantages for your material handling needs:

- **Space-Saving:** By suspending from the roof beams, the **space-efficient underslung overhead crane** frees up valuable floor space and maximizes the use of vertical headroom, which is crucial for small to medium-sized workshops.
- **Cost-Effective:** Utilizes the existing building structure (roof beams) for runway installation, reducing the need for additional structural steel, thus the *cost-saving underslung overhead crane* lowers initial investment costs.
- **High Precision:** Equipped with high-quality drive systems and control components, the **precision underslung overhead crane** ensures precise positioning of loads, which is essential for assembly and manufacturing processes.
- **Easy Installation and Maintenance:** The compact and modular design of the *easy-install underslung overhead crane* simplifies installation, and routine maintenance is convenient due to easy access to components.

- **Customizable:** The **custom underslung overhead crane** can be tailored to specific load capacities, span lengths, lifting heights, and control methods to meet the unique requirements of different industries and applications.

Conclusion

The underslung overhead crane is a versatile and efficient material handling solution that combines space-saving design, reliable performance, and advanced safety features. Whether you are in manufacturing, warehousing, maintenance, or construction, this **multi-functional underslung overhead crane** can significantly improve your operational efficiency, reduce labor costs, and ensure safe handling of heavy loads. With customizable options and a proven track record in various industries, the *high-quality underslung overhead crane* is an excellent investment for businesses looking to optimize their material handling processes.

(注：文档部分内容可能由 AI 生成)