50 Tons Rubber Tired Gantry (RTG) Crane

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The 50 tons rubber tired gantry (RTG) crane is a high-performance material handling equipment specifically designed for efficient operations in container yards, ports, and logistics hubs. As a key player in the field of heavy-duty lifting, this crane combines excellent mobility, strong load-bearing capacity, and reliable performance to meet the demanding requirements of modern cargo handling. This 50 tons rtg cranestands out for its ability to handle containers of various sizes with precision and efficiency, significantly improving the throughput of storage and transshipment operations.

Single Girder 50 Tons RTG Crane

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The single girder 50 tons RTG crane features a simplified yet robust structure, making it an ideal choice for medium-scale container handling scenarios. Its main girder is a single box-type structure made of high-quality low-alloy high-strength steel, which undergoes strict welding and heat treatment processes to ensure excellent mechanical properties and structural stability.

In terms of working principle, the single-girder design integrates the lifting mechanism, trolley traveling mechanism, and crane traveling mechanism onto a single main girder. The lifting mechanism adopts a high-performance hoist with a variable-frequency speed regulation system, allowing for smooth lifting and lowering of 50-ton loads, reducing the impact on the crane and the cargo. The trolley travels along the track on the main girder, driven by a gear motor with precise braking, ensuring accurate positioning of the load.

One of the notable advantages of the single girder 50 tons RTG crane is its compact structure, which occupies less space in the yard. This makes it suitable for yards with limited width or where space utilization is a priority. Additionally, its relatively lightweight design reduces the ground bearing pressure, minimizing the requirements for the foundation construction of the yard, thereby lowering the overall investment cost. Moreover, the maintenance of the single girder gantry crane is more convenient due to its simple structure, with fewer components to inspect and maintain, reducing downtime and maintenance costs.

This type of crane is widely used in small to medium-sized container yards, inland ports, and logistics centers where the handling volume is moderate and the requirement for space efficiency is high. It can efficiently handle 20-foot, 40-foot, and even 45-foot containers, adapting to the diverse needs of different cargo types.

Double Girder 50 Tons RTG Crane

Double Girder 50 Tons RTG Crane

The double girder 50 tons RTG crane is designed for large-scale and heavy-duty container handling operations, offering enhanced load-bearing capacity and stability. It consists of two parallel box-type main girders, connected by end carriages to form a rigid portal frame structure. The main girders are also made of high-strength steel, with reinforced sections at key stress points to withstand the heavy loads and complex forces during operation.

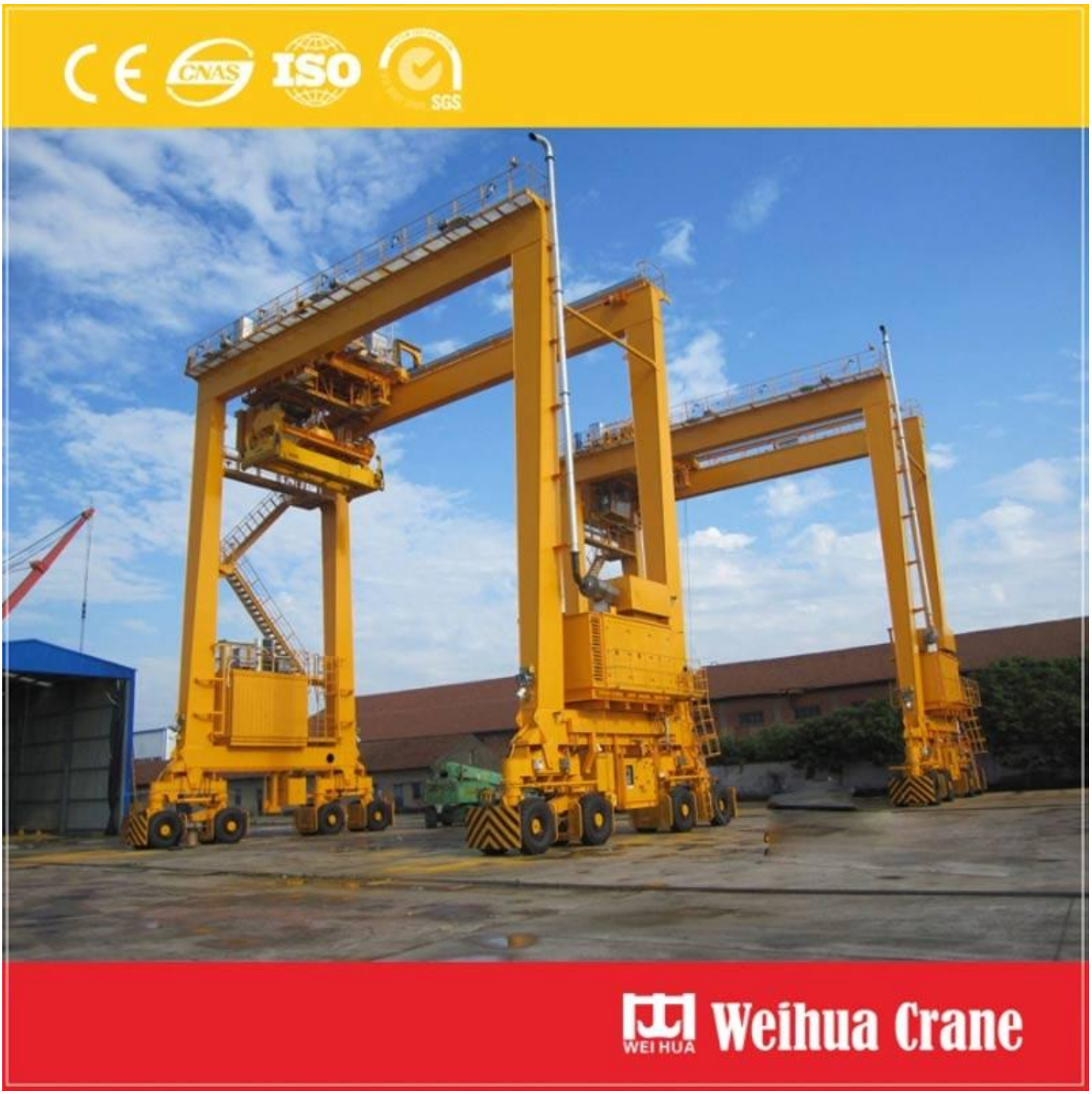
The working mechanism of the double girder 50 tons RTG crane is more sophisticated. The lifting mechanism is usually equipped with two hoists (main and auxiliary) to meet different lifting needs. The main hoist is responsible for lifting the 50-ton containers, while the auxiliary hoist can handle lighter loads or perform auxiliary operations, improving the flexibility of the crane. The trolley traveling mechanism is installed on the top of the two main girders, with a stable guide device to ensure that the trolley runs smoothly and does not deviate even under heavy loads. The crane traveling mechanism adopts a four-wheel or eight-wheel drive system, with large-diameter rubber tires that provide excellent traction and shock absorption, allowing the crane to move freely on the yard surface.

The double girder 50 tons RTG crane boasts superior load-bearing stability compared to the single-girder type. The dual-girder structure distributes the load evenly, reducing the stress on each girder and improving the overall safety and service life of the crane. It also has a larger working range, with a longer span and higher lifting height, enabling it to handle containers stacked in multiple layers (usually up to 4-5 layers) and cover a wider area of the yard.

Furthermore, the double-girder design allows for the installation of more advanced control systems and safety devices, such as anti-sway systems, automatic positioning systems, and overload protection systems, further enhancing the operational safety and efficiency.

This crane is mainly used in large ports, deep-water terminals, and large-scale container yards with high handling volumes and high requirements for lifting height and span. It can efficiently handle a large number of containers in a short time, improving the operational efficiency of the entire logistics chain.

Core Advantages of 50 Tons RTG Crane



50-ton RTG container crane used in ports

- **High Load-Bearing Capacity**: Both single-girder and double-girder types are designed to handle 50-ton loads, meeting the heavy-duty lifting needs of container handling.
- **Excellent Mobility**: Equipped with high-quality rubber tires and a powerful traveling mechanism, the crane can move flexibly in the yard without being restricted by rails, adapting to different yard layouts.
- **Precise Control**: Adopting advanced variable-frequency speed regulation and PLC control systems, the crane can achieve precise lifting, lowering, and positioning, reducing cargo damage and improving operational accuracy.
- **Enhanced Safety**: Equipped with multiple safety devices, including overload protection, limit switches, emergency stop buttons, and anti-sway systems, ensuring the safety of personnel and equipment during operation.
- **Energy Efficiency**: The use of energy-saving motors and frequency converters reduces energy consumption, lowering the operational cost for users.

50 Tons RTG Crane Technical Parameters

Parameter	Single Girder 50 Tons RTG Crane	Double Girder 50 Tons RTG Crane
Rated Lifting Capacity	50 tons	50 tons (main hoist); 10-20 tons (auxiliary hoist)
Span	18-24 meters	24-35 meters
Lifting Height	12-16 meters	16-22 meters
Traveling Speed	0-30 m/min	0-30 m/min
Trolley Traveling Speed	0-20 m/min	0-20 m/min
Lifting Speed	0-8 m/min (empty); 0-4 m/min (loaded)	0-8 m/min (empty, main hoist); 0-4 m/min (load hoist); 0-12 m/min (auxiliary hoist)

50 Tons RTG Crane Application Scenarios

The 50 tons RTG crane is widely applied in various fields related to container handling, including:

50 Tons RTG Crane For **Ports and Terminals**

As a core equipment in port container handling, the 50 tons RTG Crane works closely with quay container cranes (QCCs) to realize the "ship-yard-truck" transfer link. When containers are unloaded from ships by QCCs, the RTG Crane quickly receives and stacks them in the

designated yard area. It can flexibly adjust its working path according to the berthing position of ships and the distribution of trucks, efficiently handling 50-ton heavy containers such as those loaded with machinery, bulk goods, or hazardous materials. For large ports with multiple berths, multiple RTG cranes can operate in coordination, forming a continuous handling line to shorten the ship's berthing time and improve the port's throughput capacity. Additionally, its rubber tires adapt to the port's concrete or asphalt ground, avoiding damage to the yard surface while ensuring stable movement even in slightly uneven areas.

50 Tons RTG Crane For Container Yards

In container yards, the 50 tons RTG Crane undertakes the key tasks of container storage, retrieval, and yard rearrangement. It adopts scientific stacking strategies—usually stacking 4-5 layers for standard containers—to maximize the yard's storage density. When retrieving containers, it can accurately locate the target container through its precise positioning system, even in complex stacking scenarios (such as retrieving containers in the middle or bottom layers). For yards with frequent container turnover, the crane's fast lifting and traveling speeds (up to 30 m/min for traveling) ensure that the average handling time per container is controlled within a short range. It also supports yard planning optimization: by flexibly adjusting the stacking area, it helps yards cope with peak periods of import and export containers, reducing the risk of yard congestion.

50 Tons RTG Crane For Logistics Hubs and Inland Ports

In logistics hubs and inland ports that integrate road, rail, and waterway transportation, the 50 tons RTG Crane plays a vital role in "multi-modal transport connection". When containers arrive by train or inland ships, the crane efficiently transfers them to trucks for "last-mile delivery", or stacks them temporarily for cross-modal transshipment. Its rubber-tired design eliminates the need for fixed rails, allowing it to operate freely between railway lines, truck parking areas, and inland ship berths. For example, in inland ports along rivers, it can handle containers unloaded from barges and directly load them onto trucks bound for nearby industrial zones, shortening the transshipment cycle by 30%-40% compared to traditional rail-mounted cranes. It also supports the handling of special containers such as refrigerated containers or open-top containers by matching corresponding spreaders.

50 Tons RTG Crane For Industrial Parks

In industrial parks dominated by heavy industry (such as machinery manufacturing, automobile production, and petrochemicals), the 50 tons RTG Crane is used for handling large-sized production equipment, raw material containers, and finished product modules. For instance, in an automobile manufacturing park, it can lift 50-ton auto body stamping dies or engine assemblies from containers and transport them to the production line, ensuring the smooth supply of key production components. In petrochemical parks, it handles large

chemical raw material containers (such as liquid chemical tanks with a net weight of 50 tons) with stable lifting performance, avoiding leakage risks caused by jitter during handling. Its compact structure (especially the single-girder type) is suitable for the limited operating space in industrial parks, enabling it to work in areas between workshops or near production lines without interfering with other equipment operations.

Whether you choose the single-girder or double-girder 50 tons RTG Crane, you will get a reliable, efficient, and safe material handling solution that can significantly improve your operational efficiency and reduce costs. Contact us today to learn more about this high-quality 50 tons RTG crane and customize the most suitable solution for your needs!

WEIHUA Group: Trusted RTG Crane Supplier

As a leading global rtg crane supplier, WEIHUA Group has been dedicated to the R&D, manufacturing, and supply of high-quality lifting equipment since its establishment in 1988. Headquartered in Changyuan City, Henan Province, China, the group has grown into a large modern enterprise with 3 advanced manufacturing bases and 7 R&D centers, providing professional solutions for the material handling industry worldwide.

WEIHUA Group stands out in the rtg crane supply field with its strong technical strength and reliable product quality. Its 50 tons RTG cranes are manufactured in strict accordance with international standards, integrating advanced technologies such as variable-frequency speed regulation and intelligent control systems to ensure efficient, safe, and stable operation. With rich experience in serving global customers, the group has successfully supplied RTG cranes to numerous ports, container yards, and logistics hubs, earning a good reputation for its on-time delivery and comprehensive after-sales support. As your trusted rtg crane supplier, WEIHUA Group is committed to providing customized, cost-effective solutions to meet the diverse needs of customers around the world.

FAQ: 50 Tons Rubber Tired Gantry (RTG) Crane

Q1: What is the maintenance cycle of the 50 tons RTG Crane?

A: The regular maintenance cycle depends on the frequency of use, but generally, a minor maintenance (including inspection of tires, brakes, and lubrication of moving parts) should be conducted every 3 months, and a major maintenance (covering hoisting mechanism, electrical system, and structural components) should be performed annually. We also provide customized maintenance plans based on the user's specific operating conditions.

Q2: Can the 50 tons RTG Crane be powered by both diesel and electricity?

A: Yes, most models of our 50 tons RTG Crane are available in dual-power versions (diesel-electric hybrid). The diesel engine is suitable for outdoor operations without power supply, while the electric mode can be used when there is a grid connection, which is more energy-

efficient and environmentally friendly. Users can choose the power mode according to their actual needs.

Q3: Is professional training required to operate this RTG crane?

A: Absolutely. Operating the 50 tons RTG Crane requires professional skills and knowledge. We provide comprehensive training services for users, including theoretical courses (crane structure, safety regulations, etc.) and practical operation guidance. Only after passing the assessment and obtaining the corresponding operation certificate can the operator operate the crane to ensure safety.

Q4: Can the span and lifting height of the crane be customized?

A: Yes, we offer customization services for the span and lifting height of the 50 tons RTG Crane. According to the user's yard size, container stacking requirements, and other specific needs, our engineering team will design and manufacture the crane to meet the personalized operational demands.

Q5: What after-sales support do you provide for the 50 tons RTG Crane?

A: We provide a full range of after-sales support, including 24/7 technical consultation, spare parts supply (with a global spare parts warehouse to ensure timely delivery), on-site maintenance and repair services, and crane upgrade services. We are committed to solving any problems encountered by users during the use of the crane as soon as possible.