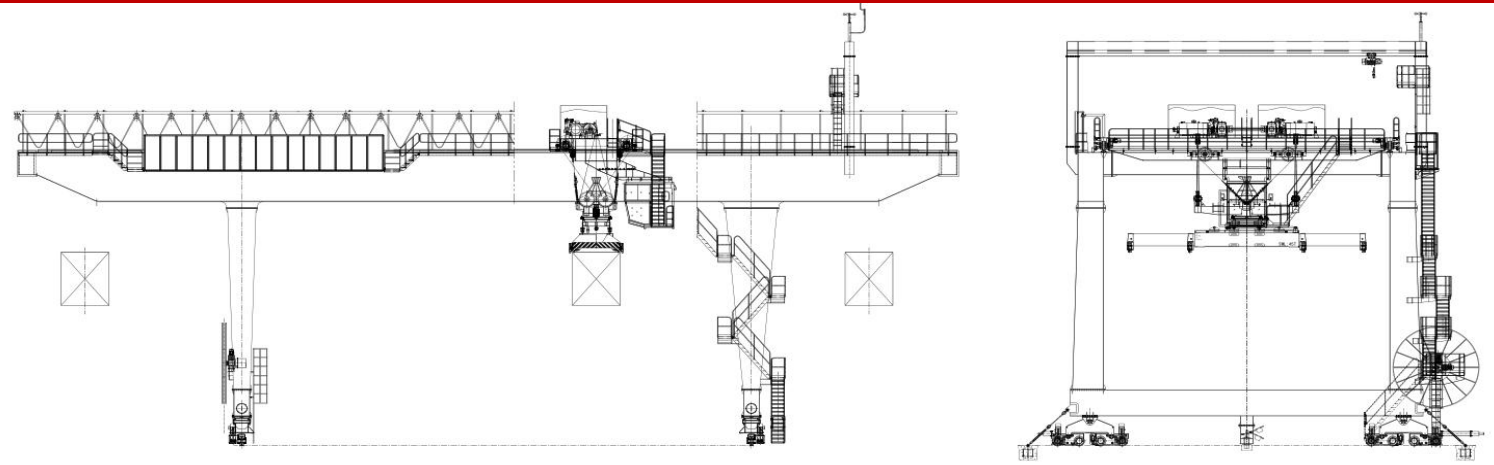


# KINCRANES

## Rail Mounted Gantry (RMG) Cranes





Rail-mounted gantry (RMG) cranes by KNCRANES embody our **decades of crane design experience**. This has resulted in **high performance, high reliability, operational accuracy**, while significantly **reducing operational costs and energy consumption**.

Rail-mounted gantry (RMG) cranes are primarily used for the loading, unloading, handling, and stacking of containers in container rail transfer yards and large container storage and transit yards. The RMG crane consists of a main beam, rigid and flexible legs, a trolley, a hoisting mechanism, a gantry travel mechanism, an electrical system, and an operator's cabin. Depending on the stacking operation process, the cranes can be designed with cantilevers extending on one or both sides of the single leg or double legs, becoming single or double cantilever models, respectively. Models without any extension are known as non-cantilever types. The specific structural form of non-cantilever, single cantilever, or double cantilever is determined based on the site conditions, container storage and transit process, and the vehicles being loaded or unloaded (container trucks or railway vehicles).

The RMG crane is operated by a driver from within the **cabin using a master control station**. The cabin is usually suspended under the trolley and moves with it. The master control station in the cabin allows for complete operation of the crane. It's also possible to operate the gantry travel from the side of the gantry for convenient temporary repositioning of the crane. When operating from the side of the gantry, electrical interlocking with the main control station is established.

KNCRANES Rail Mounted Gantry Cranes are designed and manufactured according to national and industry standards such as GB/T3811 "Design Specifications for Cranes" and GB/T14406 "General Gantry Crane". The gantry adopts a U-shaped support leg, and the upper part of the crane is capable of rotating, with container spreaders using electric telescoping spreaders. These cranes are suitable for lifting international standard containers (20', 40', 45' containers) and are characterized by advanced performance, high production efficiency, good maneuverability, a wide range of applications, and low sensitivity to uneven ground surfaces.

## Data Sheet

- **Capacity:** 30t-60t, Customized
- **Span Length:** 20m-40m, Customized
- **Lifting Height:** 9m-18m, Customized
- **Duty Class:** M6-M8
- **Working Voltage:** 220V~690V, 50-60Hz, 3ph AC
- **Motor Brand:** SIEMENS/ABB/SEW (with heater)
- **Reducer Brand:** SEW
- **Brake Brand:** ZPMC TOP 1 China Brand
- **Wire Rope Tensile Strength :** 1770MPa
- **Long Traveling Wheels :** 24 sets
- **Rail Type:** P65
- **Protection Level of Motor:** IP55
- **Isolation Grade of Motor:** Class H
- **Working Temperature:** -40~40°C
- **Spreader:** Electric telescopic
- **Spreader Anti-sway Type:** 8 rope anti-sway
- **Spreader Rotation Angle:** +95°/-185°

## Rotating Trolley

Optimized design, smooth rotating, precise positioning



## Control System

Modular design applied for quick load positioning and return



## Travel mechanism

Stable, low noise, easy and quick to maintain



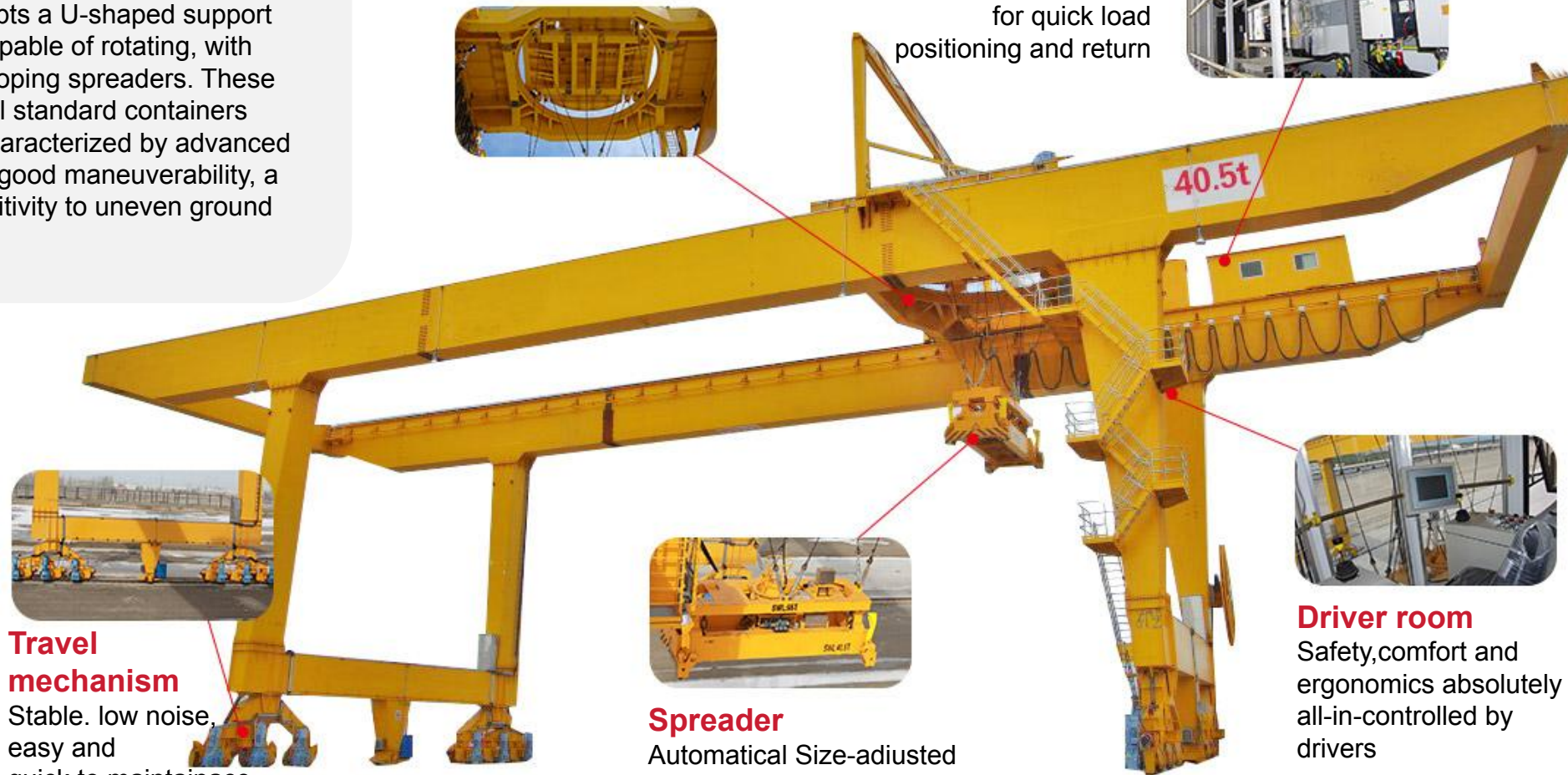
## Spreader

Automatic Size-adjusted for 20' 40' 45' container handling



## Driver room

Safety, comfort and ergonomics absolutely all-in-controlled by drivers





### Main beam

- Q345E steel material for steel structure, Can withstand the impact test of minus 40 degrees
- Ultrasonic detection
- Strong box design, less distortion automatic welding whole beam shot blasting treatment class: Sa2.5,
- Relieving welding residual stress
- Epoxy zinc-rich paint, 10 years life span for anti-rust



### Lifting Mechanism

- Flexible side hanging lifting system
- Double brakes for lifting safety control
- Lifting and travelling limit switches
- Weight overload limit switch



### Motor

- ABB/SEW Brand (with heater)
- High protection class IP55
- Continuous operation duration factor
- Built-in thermostat overheating protection,
- Optimization of air-cooled
- With manual release
- With heater for low temperature starting.



### Reducer (gear box)

- Hard tooth flanks make the reducer long service life SEW Brand
- High Reliability
- Half grease lubrication, Sealing good
- With heater for low temperature starting.



### Brake ( 2 sets brake for lifting )

- ZPMC brand Top one brand in China
- Dual independent brakes for each lifting mechanism,
- 200% brake torque for safety



### Monitor Unit Included

- The Screen will show crane working status:
- Loading data
- Lifting height
- Traveling limit switch status
- Inter-lock
- Anti-collision limit switch status
- Brake status
- Working time



### Electric Control Box

- Schneider brand electric parts
- Siemens PLC System
- Industrial AC included
- Surface by the anti-corrosion treatment reasonable layout, easy maintenance
- Protection class IP55
- Ambient temperature:  $<45^{\circ}\text{C}$  , humidity  $<90\%$
- Cable with color marks and galvanized steel pipe protection



### Drum and Wire Rope

- Large wire rope curvature
- 7.1 times safety factor
- High location accuracy, small deviation
- High strength steel wire rope,
- Rolled type drum , high strength
- Q345B steel material ,Use seamless steel pile, CNC slotting
- 6x36 Structure, Steel Core, Top one China Wire Rope Brand



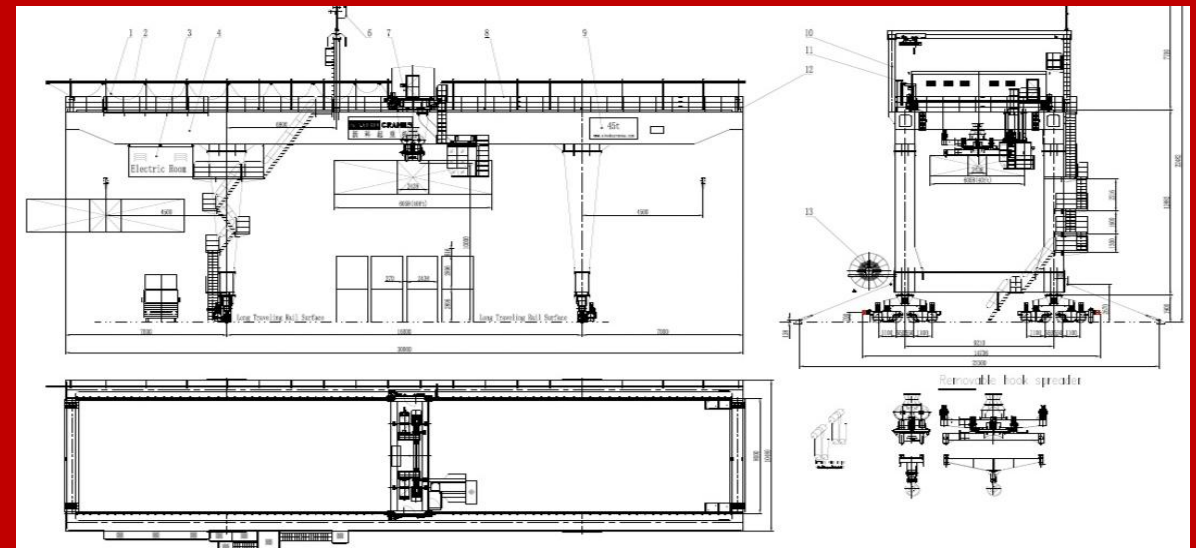
### Wheels

- 35CrMnSiA low alloy ultra-high strength steel material steel casting technology process
- EN-9 forged Steel suitable Heat Treated upto
- Hardness 280 to 300 BHN



### Cabin Control

- Cab is movable
- Industrial AC The temperature in the cabin at an ambient temperature of  $-40^{\circ}\text{C}$  shall be no lower than  $+16^{\circ}\text{C}$
- Equipped with automatic exterior wipers with washers and a rotary control chair with tilt-adjustable back and seat



We can tailor RMG cranes to your specific operational needs. We offer a variety of specifications and configurations, including non-cantilever and double-sided cantilever models, as well as cranes with rotating trolleys or fixed trolleys, thus meeting the lifting requirements for various types of containers and trailers.