

# Liebherr Rubber Tyre Gantry Cranes



# LIEBHERR

# 1 Overview

- Rubber tyre gantry cranes (RTGs) are manufactured according to individual customer needs in a variety of models
- Stable, rigid, high quality steel structure
- Crane spans of between 5 and 8 containers wide (plus a truck lane) and hoisting heights between 1 over 3 to 1 over 6 containers high
- Liebherr RTG cranes are designed in either 8 or 16 wheel configuration with AC or DC drive control systems
- Special design features are available to enable automation options, interface with terminal operating systems, data communication between crane PLC and Port Engineering Office and to Liebherr Service Department

# 2 Driver Comfort

- Driver's seat, control desk, joysticks and monitor are ergonomically arranged
- Air-conditioning
- Insulated cabin with laminated glazed windows on walls and safety floor glass
- Large cab windows provide optimal visibility
- Driver's digital display EMS unit
- Equipped with telephone / intercom system
- Additional driver aids available



# 3

## High Performance Reliable Equipment

Liebherr RTG Cranes benefit from extensive in-house expertise in structural, mechanical, electrical and electronic engineering thereby guaranteeing the highest standards in innovative technology, product quality and long term performance as well as reduced operating and lifetime costs.

### Direct Driven Wheels

- Direct driven long travel wheels via motor/gearbox/ coupling units instead of chain drives
- RTGs come in a variety of models with 8 or 16 wheels. 16 wheel RTGs have lower wheel loads
- Reduced tyre wear with differential axles, wheels rotate during 90° turn on 16 wheeler
- 4 motors on 8 wheeler
- Wheel guards

### Steering Mode

- Gantry Align (standard)
- Hydraulic steering (optional)

### Motor Selection

- All drives are sized for maximum torque and power requirements guaranteeing extended lifetime

### Diesel Engine / Generator Set

- Industry leading engine suppliers
- Eco friendly design
- Efficient fuel management system
- Enhanced fuel efficiency features
- Power supply by cable reel (optional)
- Auxiliary diesel genset (optional)



# 4 Economy & Productivity

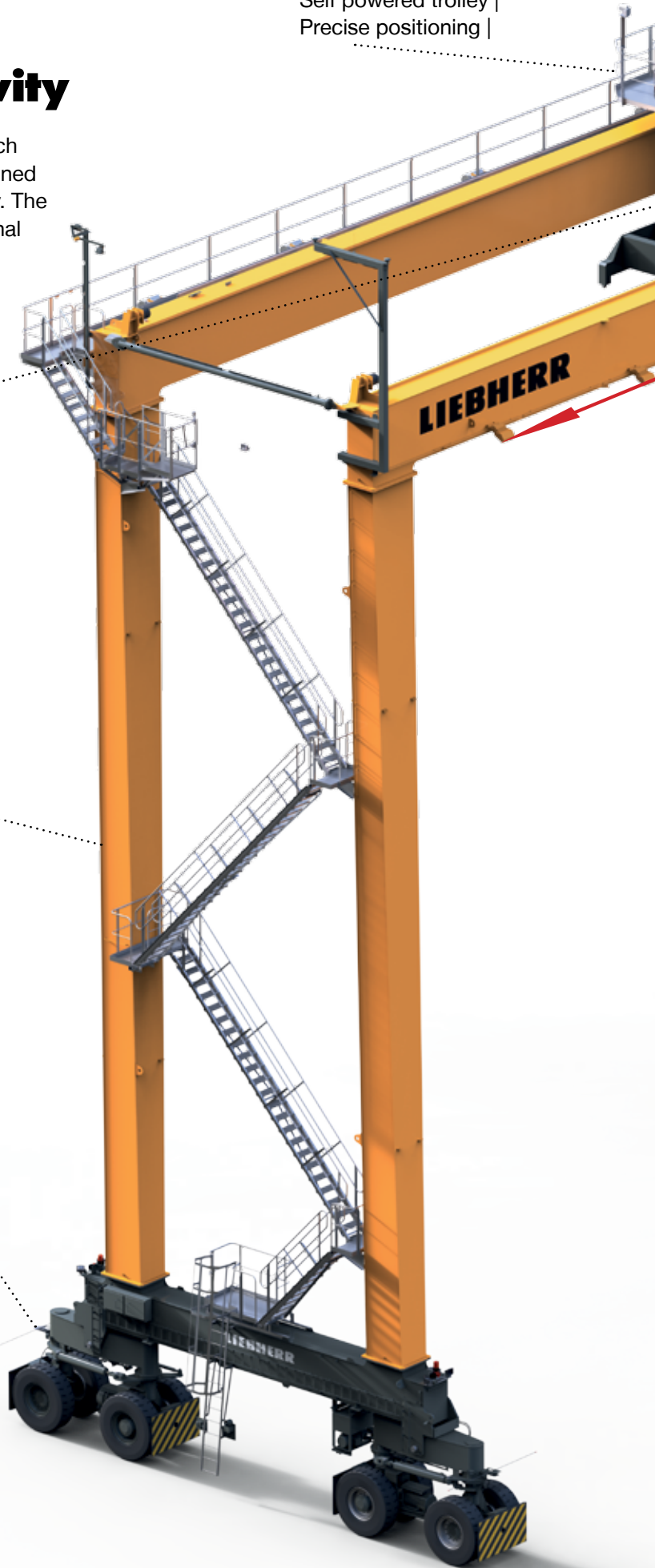
Liebherr cranes are engineered with efficiency in mind. Each component of a Liebherr crane has been specifically designed for maximum productivity, reliability, availability and quality. The result is a crane delivering excellent productivity, exceptional lifetime costs and industry leading longevity.

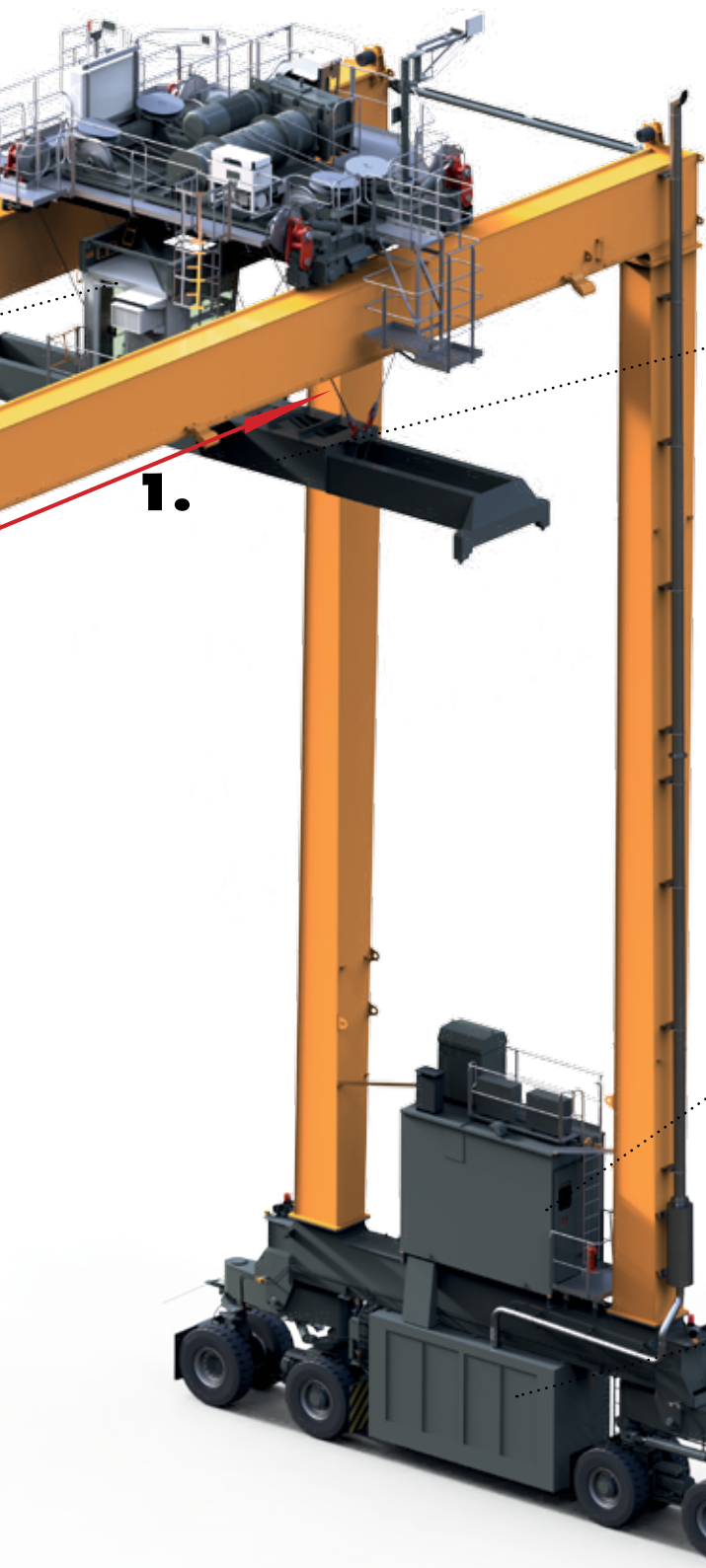
Self powered trolley |  
Precise positioning |

Ergonomic driver's cabin | Designed with driver comfort in mind |  
Reduced fatigue

All structural elements are manufactured from high tensile steel, S355J2N | Reduced weight leading to savings in civil infrastructure costs

Anti collision | Gantry Align | DGPS | Increased productivity





Liebherr RTGs don't require a head block | Reduced weight

No additional motors or ropes for positioning of spreader | Reduced weight and maintenance costs.

Eight rope reeving | No sway or skew | Precise positioning of spreader | Increased efficiency

**1.**

**2.**

"Plug-in" modular construction of main drives assists fault finding and results in reduced maintenance costs

**3.**

Choice of power to match operational requirements  
Dual speed diesel | Variable speed diesel | Diesel electric hybrid | Full electric

**1.2.3.** Simultaneous motion of all drives

### **Eight Rope Reeving System**

- The eight rope reeving arrangement for the hoist located on the trolley ensures that load sway is eliminated in hoist, trolley, long travel and skew directions
- Lower energy consumption
- Superior fine positioning for stack building and truck loading
- Increase in productivity of between 30 - 40% when compared to alternative designs

### **Drive Management System**

- Allows simultaneous drive motion for hoist, trolley and travel
- Increases the machine's performance
- Reduces fuel consumption
- Optimised for automation

### **Liebherr Options**

- Twinlift 50.8 tonnes/ 65 tonnes
- DGPS automatic gantry steering & container position recognition, with interface to terminal operating system.
- Contactless anti-collision system
- Energy chain / festoon
- Remote access to crane management system

### **Electric Spreader**

- Connected directly to the hoist ropes without a head block thereby reducing tare weight and providing a more energy efficient operational cycle with lower fuel consumption
- Single or twinlift execution
- Fixed side guides provided

### **Liebherr Drive Systems**

- Liebherr engineered drive control system for AC and DC
- Maximum reliability
- Ease of service and repair
- Crane specific modular design
- High quality components



# 5 Power Options

Liebherr offer a full range of power options to suit different operational models. Whether it is diesel, electric or a combination of both, the Liebherr RTG will deliver power when it is needed to ensure higher productivity.

## Dual Speed Diesel

Liebherr RTGs are supplied with a dual speed diesel engine as standard. Controlled by Liebherr designed drive systems, the engine switches to idle mode when full power is not required reducing fuel consumption. Significant savings on fuel bills are achievable when compared with traditional RTG power options.

## Diesel Electric Hybrid

Fitted with an energy storage solution, this option offers substantial savings without any loss in productivity. Using stored power from the reserve when ever possible, the reduced dependability on the diesel engine typically delivers fuel savings of up to 40% dependent on operation.

## Variable Speed Diesel

A Liebherr variable speed engine delivers optimum power levels as required while reducing the engine speed wherever possible. Liebherr's drive system ensures precision control over the entire process resulting in further savings in fuel consumption.

## Full Electric

A full electric RTG from Liebherr delivers many benefits. Reduced maintenance and lubrication costs resulting in substantial savings, with a considerable reduction in energy costs and the elimination of engine noise and emissions. RTGs can be factory fitted for electric operation or an E-RTG solution can be retro fitted. Power regeneration on the RTG to the grid also means that energy costs are further reduced. Options include a cable reeling drum or conductor bar system.

Electric RTGs can be fitted with an auxiliary generator or connection for a portable generator to allow movement between the stacks.



# Liebherr Container Cranes Ltd



**Liebherr Container Cranes Ltd.**

Killarney, Co Kerry, Ireland

Tel: +353 64 6670200

[www.liebherr.com](http://www.liebherr.com)

[facebook.com/liebherrmaritime](https://www.facebook.com/liebherrmaritime)

[sales.lcc@liebherr.com](mailto:sales.lcc@liebherr.com)