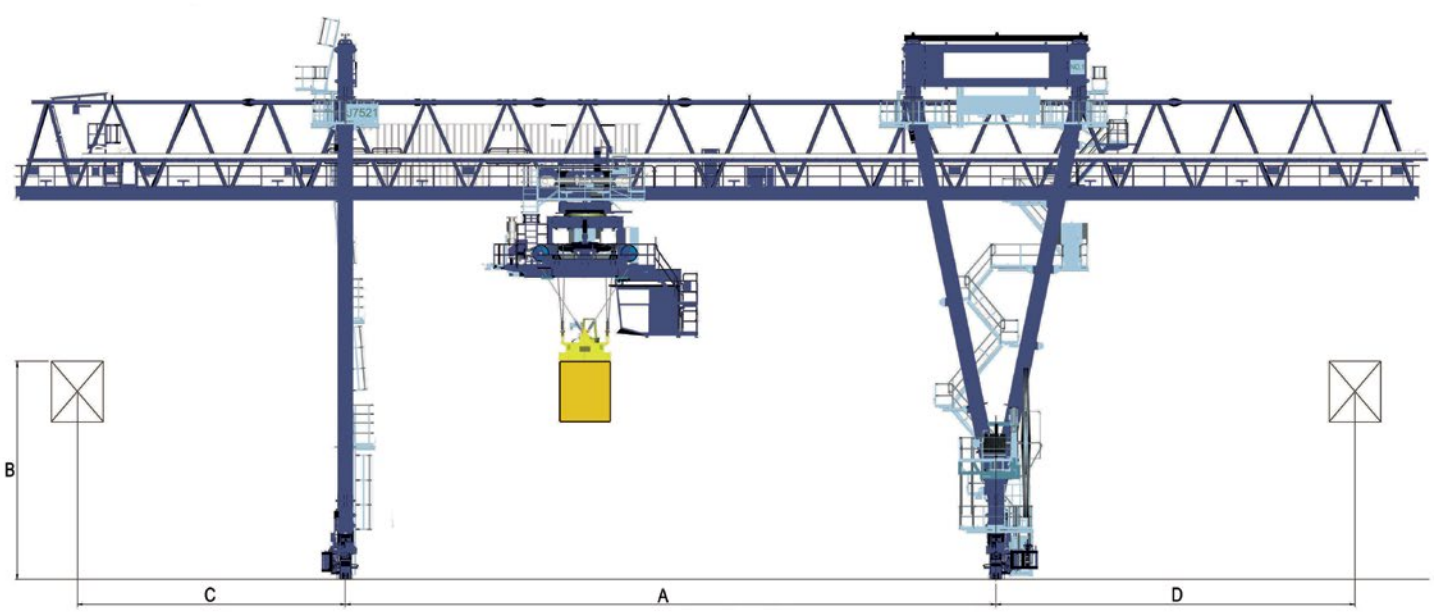
Technical Description
Rail Mounted Gantry Cranes

RMG

LIEBHERR

Technical Data



RMG Model Designation

S190 L (MT) / (RT)

→	Rotating machinery trolley (optional)
→	Machinery trolley
→	Lattice structure for main beam
→	Hoist motor size

Typical RMG Model Range*

A: Gantry span	22 - 70 m
B: Lifting Height	From 9.2 m for 1 over 2
	Up to 26.9 for 1 over 8
C: Cantilever	0 - 20 m
D: Cantilever	0 - 20 m
E: Travel wheel guage	16.5 m - 18.2 m
F: Buffer to buffer	23.2 m - 25.5 m
G: Wheel spacing	1 m - 2 m dependant on wheel loads
Wheels per corner	6 - wide leg
	4 - narrow leg
SWL	40.6 - 50 t single | 50 - 65 t twin

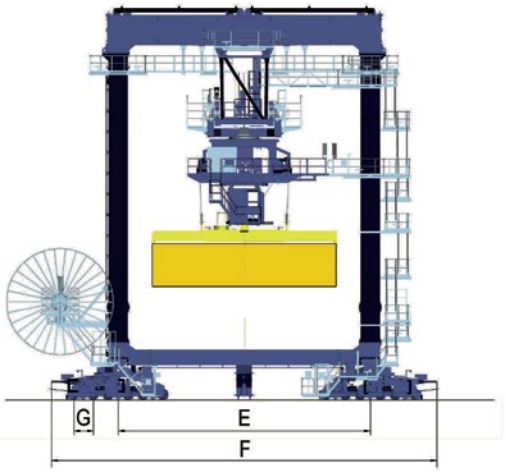
*Other features and dimensions also available

Typical Design Parameters*

Classification according to F.E.M.	U7-Q2-A7 (Single lift)
In service wind speed	72 km/h (20 m/s)
Out of service wind speed	151.2 km/h (42 m/s)
Ambient temperature range	-45°C to + 45°C

Working Speeds**

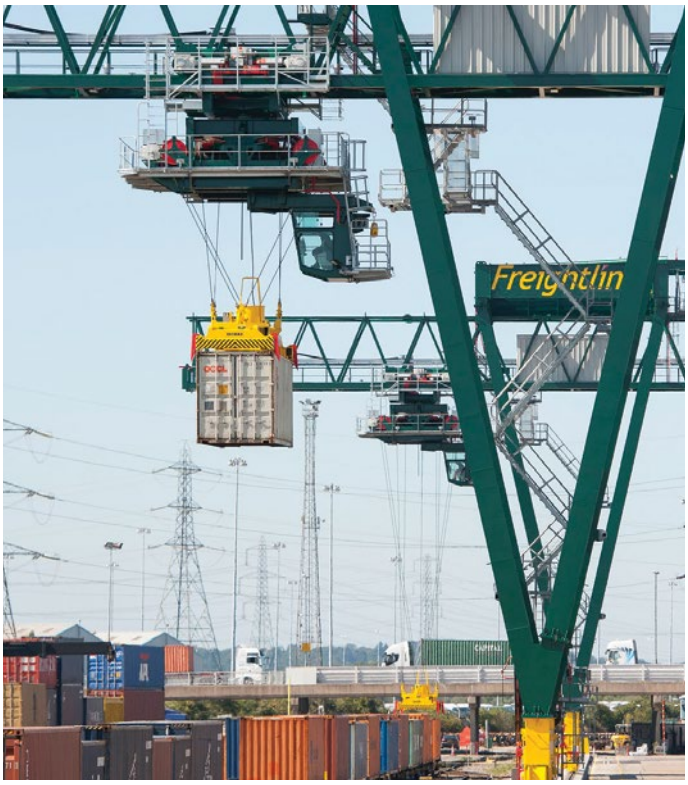
Hoisting with no load	56 m/min
Hoisting with rated load	28 m/min
Trolley travel (with and without load)	70 m/min
Gantry travel without load	130 m/min
Slewing ± 190° (optional)	1.2 RPM



Advantages of RMG for Yard Stacking

- Suitable for both port and rail terminals.
- Suitable for various yard space conditions.
- Increased yard capacity with wider and higher stack possibilities.
- Reduction in emissions and noise.
- Minimal maintenance.
- Electric supply for energy efficiency and reduced running costs.

Liebherr Anti-Sway System (Eight Rope Reeving)



Advantages by Design

- Minimal spreader positioning times.
- No-sway in hoist, trolley and travel directions.
- Anti-skew.
- No additional ropes or devices necessary.
- No head block - Reduced rope load and tare weight.
- Lower energy consumption.
- All electric spreader - Less maintenance.
- Significant increase in productivity when compared with alternative designs.

Motors and Speed Control System

Motors / Suppliers

- All drives are sized for maximum torque and power requirements, guaranteeing extended lifetime.
- All major components are sourced from reputable european manufacturers.

Speed Control System

- The control system used has been specifically developed for container cranes by Liebherr, which has resulted in a flexible, robust construction with exceptional reliability.
- The “plug-in” modular construction of the electronic equipment is designed to maximise crane availability and minimise the necessity for highly skilled electronic personnel.

Liebherr Rail Mounted Gantry Crane

- Liebherr reeving system: Sway prevention, not sway correction.
- Regeneration during lowering of load and drive deceleration, results in overall reduction in power consumption.
- Electric (gantry align) steering.
- Rigid robust structure - Optimum for automation. Optional DGPS auto steering and container positioning.
- Direct gearbox driven travel systems.
- Separate drives for hoist, travel and trolley, with no need for side shift on the spreader. Allows superior fine positioning with simultaneous motion.
- Worldwide Liebherr service network.
- Extensive training (in-house and on-site).
- Purpose built state-of-the-art design and production facilities located in Ireland since 1958.
- Highly skilled and experienced employees with expertise in-house for after sales service.
- Responsibility with Liebherr, eliminating interface and compatibility problems (i.e. structural, mechanical and electrical design, production, commissioning and service).

Options

- Rotating machinery trolley.
- Interface with TOS (terminal operating system).
- Trim and skew spreader positioning.
- Energy chain / festoon system.
- Non-contact anti-collision system.
- Automation of RMG and container tracking.
- Container positioning system.
- Remote operation option.
- Fault data between crane and office by RF link / Fibre optic with optional link to the Liebherr factory.

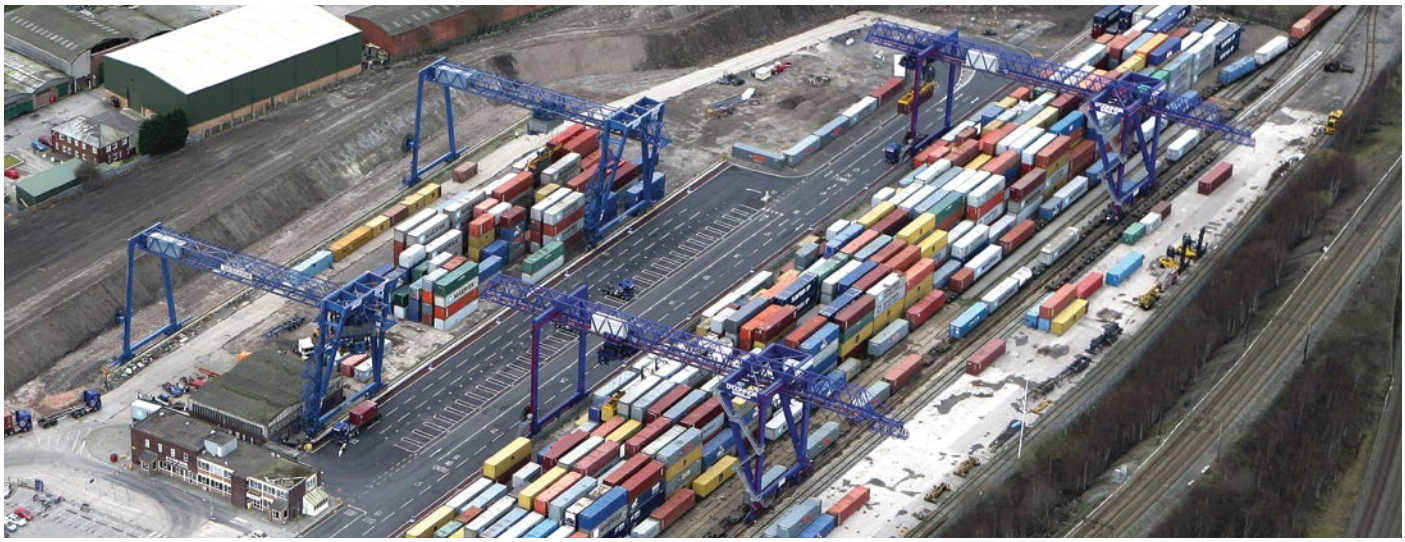
Diagnostic and Managment System

Description

- Liebherr designed and built.
- Windows OS with CoDeSys logic control system.
- Status of switchgear and external electrical components.
- Stores up to 20,000 faults.
- User-friendly interface with easy to use colourful screens.
- Independence of crane logic system, therefore does not interfere with crane control in the event of self failure.
- Includes trending and tables for production data and drive data.

Summary of Main System Features

- General Control Overview.
- “Crane ON” status.
- Individual Drive ON screens (one for each drive).
- Detailed drive data (motor current, voltage, speed).
- Wind speed and history.
- Spreader status.
- Fault stack.
- Load statistics.
- Maintenance.



RMG—06/2014—Subject to change without notice.

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