

EN

Portal slewing cranes

Product range

www.liebherr.com

LIEBHERR

Maritime cranes



Tailor-made design for your needs



1 Performance range

The LPS 180 provides 64 tonnes of lifting capacity, a 35-metre boom, hoisting speeds up to 90 metres per minute, and bulk handling of 600 tonnes per hour. At the top end, the LPS 800 achieves 308 tonnes, a 66-metre boom, speeds up to 140 metres per minute, and 2,300 tonnes per hour, covering everything from routine to heavy-duty port operations.

2 Portal versatility

Flexible portal width available. Designed for narrow finger piers and quays with low ground pressure. Compatible with existing rail tracks for uninterrupted operations. Driving range up to 80 metres on low voltage and over 650 metres on high voltage. Optional bogie design enables curved rail travel. Equipped with storm pins for wind resistance up to 50 m/s or more with tie-down systems, and optical or radar anti-collision systems for maximum safety.

3 Electric drive

The LPS series offers flexible drive options, including electric and/or Stage V-compliant diesel engines, depending on terminal requirements. For added efficiency, the hydraulic power-booster Pactronic can be integrated, storing surplus energy and releasing it for extra turnover. This setup reduces emissions and increases turnover with electric drives, while also ensuring reliable performance in terminals with limited or unstable electric infrastructure.

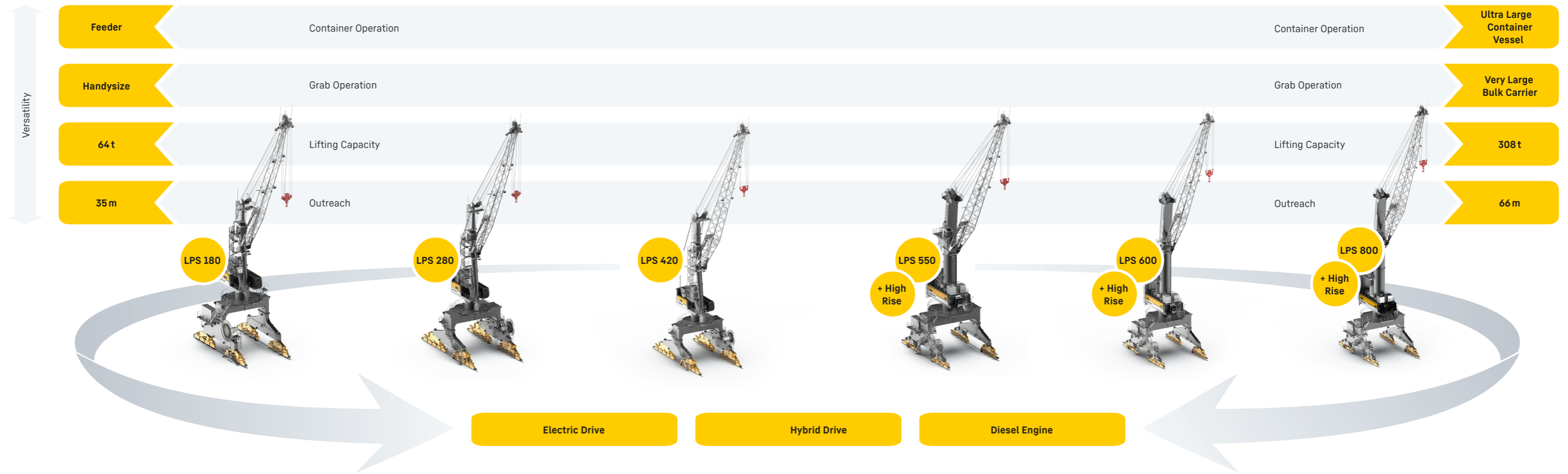
One crane, a wealth of possibilities: the Liebherr Portal Slewing Crane (LPS) offers extensive customisation and versatility, adapting to the unique needs of your port operations. With a focus on high performance and efficiency, the LPS is

a true all-rounder and a key asset for handling all types of cargo – from containers and bulk materials to general cargo and heavy lifts of up to 308 tonnes. Any of the LPS cranes can connect to shore power supplies ranging from 400 V to

over 21 kV at 50/60 Hz. The customised design of the portal allows for the placement of powerful cranes on existing rail tracks. Additionally, versatile drive systems with Stage V-compliant diesel engines offer flexibility for terminals with

out electric infrastructure or with unstable power grids. The LPS is a turnkey solution, delivered with all required lifting attachments, with interfaces adjustable to your requirements.

LPS product range



LPS Product Range	LPS 180	LPS 280	LPS 420	LPS 550	LPS 600	LPS 800
Lifting capacity (max.)	64 tonnes	84 tonnes	124 tonnes	154 tonnes	208 tonnes	308 tonnes
Outreach	35 metres	40 metres	48 metres	54 metres	61 metres	66 metres
Hoisting/lowering speed	up to 90 metres per minute	up to 115 metres per minute	up to 120 metres per minute	up to 120 metres per minute	up to 120 metres per minute	up to 140 metres per minute
Bulk material handling*	up to 600 tonnes per hour	up to 800 tonnes per hour	up to 1,500 tonnes per hour (2,000 with Pactronic)	up to 1,500 tonnes per hour (2,000 with Pactronic)	up to 1,800 tonnes per hour (2,300 with Pactronic)	up to 1,800 tonnes per hour (2,300 with Pactronic)

*Performance data under ideal conditions.

Key benefits



- **Tailor-made design:** Customisable to meet specific customer requirements, ensuring optimal performance and efficiency.
- **High performance:** Proven turnover figures in bulk cargo handling, with capacities of up to 2,300 tonnes per hour.
- **Electric drives:** Electro-hydraulic drives are available. All electric drives are compatible with shore power supplies from 400 V to over 21 kV at 50/60 Hz, reducing local emissions and operational costs.
- **Drive system flexibility:** Stage V-compliant diesel engines offer flexibility for terminals without electric infrastructure or with unstable power grids.
- **Turnkey solution:** Supplied with all required lifting attachments and adjustable interfaces for seamless integration into existing infrastructure. Delivery from Liebherr Rostock to the customer.

Reasons to choose the portal solution



- **Narrow finger pier:** Ideal for piers requiring access routes for mobile and service equipment, maximising space utilisation.
- **Infrastructure compatibility:** Suitable for piers with existing infrastructure like conveyor belts and pipes, enabling efficient cargo handling.
- **Legacy infrastructure:** Allows easy crane installation without altering port operations, minimising disruption.
- **Rail-connected berth:** Enables direct loading and unloading of rail wagons beneath the portal crane, enhancing operational efficiency.
- **Reinforced berth areas:** Designed for quays where only the zones beneath the rail tracks are structurally reinforced. Due to limited ground pressure resistance between the rails, a standard LHM cannot be positioned in this area and must operate from behind the rail track. An LPS ensures safe crane operation while maintaining full outreach efficiency.



Comprehensive solutions for a variety of terminals



Efficient cargo handling

The LPS combines the fast handling advantages of the LHM crane with the ability to transfer cargo via rails or conveyor belts. This makes it ideal for existing terminals with complex infrastructure and high demands for efficiency, flexibility and turnover.



Enhanced safety and maintenance

The LPS is equipped with storm anchors and optional automatic take-up wedges to secure the crane during adverse weather, handling wind speeds up to 50 m/s. These devices prevent crane drifting; customised safety solutions are available for higher wind loads or earthquake-prone areas. The automatic take-up wedge secures the crane after each operation, while storm pins alone offer quick, simple handling. For operator safety and efficiency, the LPS features a fully handrail-guided cabin access system and advanced optical or radar anti-collision systems for secure operations.



Customisable and scalable

The LPS is highly customisable, allowing adjustments to meet specific operational requirements. Its scalable design ensures the crane evolves with terminal needs, delivering long-term value and consistent performance.

The LPS – Application areas

The Liebherr LPS range offers versatile, high-performance solutions for efficient cargo handling in terminals with diverse operational needs.



Delivering value to steel, sugar, and food logistics

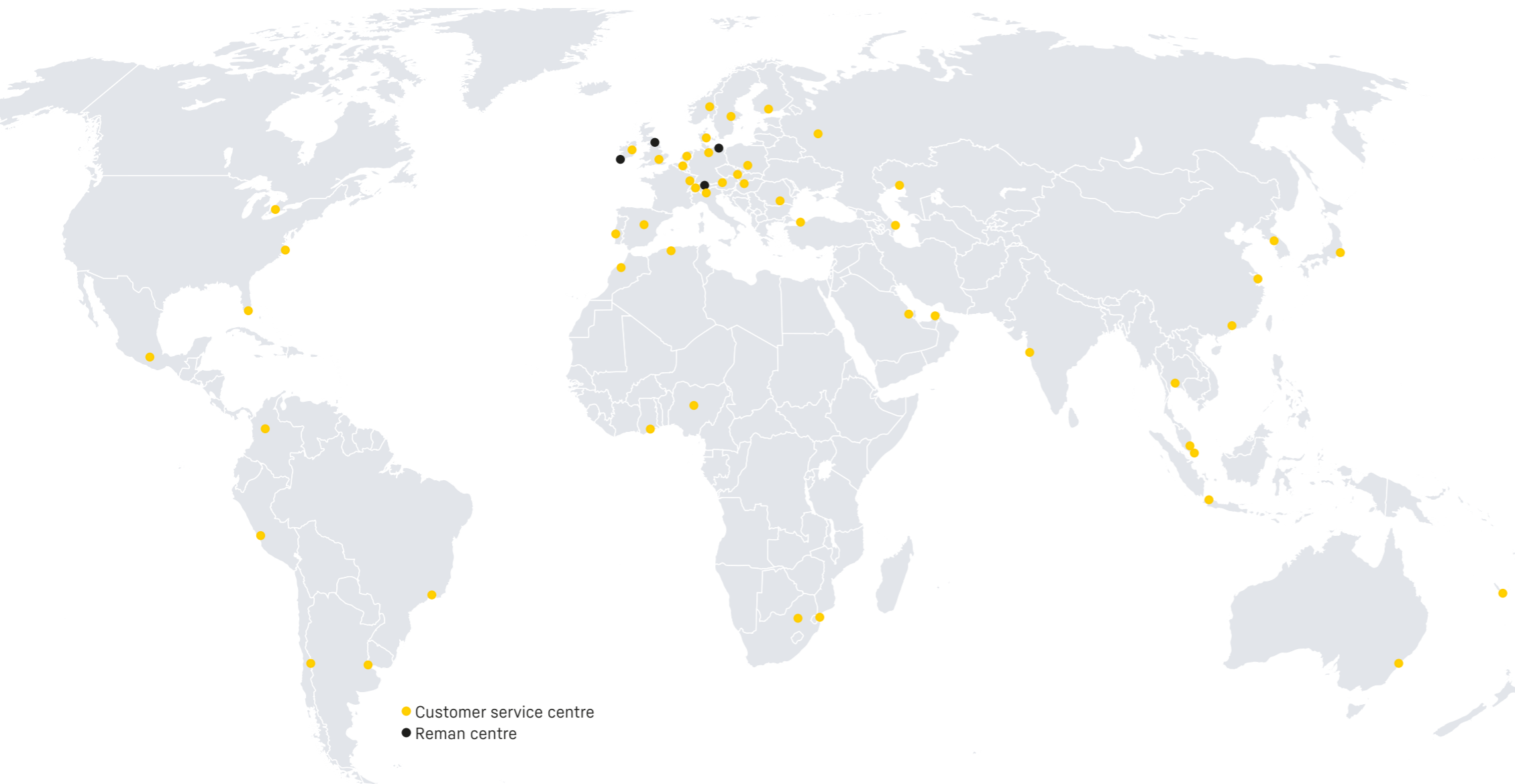
- **Efficient intermodal transfer for steel cargo:** The LPS portal crane streamlines the direct movement of steel coils, billets, and plates between vessels, railcars, and trucks, supporting efficient intermodal operations and reducing the need for multiple handling steps. Its adaptability to both bulk and general cargo forms is particularly valuable for steel terminals that manage a mix of raw materials and finished products.
- **Bulk handling versatility for sugar and food commodities:** The LPS is engineered to handle a wide range of food-related cargo, including raw and refined sugar, soybeans, grain, and more. Its grab and lifting attachments can be quickly adapted for different cargo types and packaging, allowing terminals to efficiently switch between bulk, bagged, or containerised goods as market demands shift.
- **Optimised space utilisation:** The compact, rail-mounted portal design allows for efficient use of space, even on narrow or congested quays. This is especially beneficial for sugar and food terminals with high cargo turnover and limited available area, as well as steel ports requiring organised storage and rapid cargo flow.

Supporting a wide range of cargo types

- **Container handling:** The LPS efficiently loads and unloads containers from ships, trains, and trucks, making it highly adaptable for intermodal transport. Its advanced slewing and hoisting mechanisms enable rapid, precise positioning, supporting seamless cargo movement across different modes and minimising turnaround times for vessels and land-based carriers.
- **Bulk material handling:** Designed for high-throughput operations, the LPS handles bulk commodities with impressive turnover rates – up to 2,300 tonnes per hour. Its SmartGrip technology automatically optimises grab filling, reducing overloads while improving cycle times and overall efficiency.
- **General cargo and heavy lifts:** The LPS is capable of lifting oversized and heavy items, including project cargo, machinery, and steel components, with models supporting safe working loads (SWL) up to 308 tonnes. It is supplied with a variety of lifting attachments, such as hooks, spreaders, and grabs, allowing operators to handle diverse cargo forms with ease. This versatility makes the LPS ideal for terminals that regularly manage both standard cargo and complex, heavy-lift operations.



Worldwide at your service



Find your nearest service partner:

Our worldwide network of highly qualified and experienced engineers and technical consultants is at your disposal, providing rapid response times and the highest levels of expert service. This keeps your machines running at an optimum level delivering exceptional productivity and reliable performance.



A new service era Service excellence

Real-time and remote service

With XpertAssist, our service technicians can perform remote support and fault analysis in real time, regardless of your location. This increases the availability and service life of your machines while reducing operating and maintenance costs.



Technical support

Based on many years of experience, we offer effective help and support from our specially trained technical advisors and service technicians. Regardless of the location or life cycle phase of your machine, our experts are at your disposal.



Experience and know-how transfer

Training

Our worldwide maritime training centres provide professional training for customers, partners and employees in the areas of product, operator and business skills. The training concepts are developed in close cooperation with the target groups and focus on product knowledge, crane operation, maintenance and fault diagnosis.



Simulators

The LiSIM simulator enables an unprecedented simulation of crane operation. Thanks to the complete integration of the original crane control hardware via a CAN BUS client, all sensors on the real machine can be integrated and simulated. This level of integration is unique in the market and provides a training experience that closely resembles reality.

The use of VR glasses enables complete immersion in the virtual port environment and creates a detailed representation of the crane driver's cabin in three-dimensional space.

LiSIM Move – simulation to go

LiSIM Move is Liebherr's portable training simulator, designed for maximum flexibility without compromising training quality. With intuitive controls, immersive visuals, and a compact setup, LiSIM Move brings crane operator training directly to your site, event, or classroom. Transportable in a suitcase, it allows for quick and convenient setup, making it ideal for various training environments.

Your personal customer portal

MyLiebherr

MyLiebherr is your ticket to our online world with a variety of services for your Liebherr machines. You will benefit from comprehensive services and additional features such as:

- individual management of your machines
- ease of contact with your Liebherr service partner – round the clock
- straight forward and secure management of your customer data
- instant access to the latest documentation and parts list of your machine
- simple parts ordering from your Liebherr service partner



**Manage machines,
buy parts or check
availability on**

www.myliebherr.com



All digital services in one place

Simply register your machines and you will be able to download the latest documentation, to access the spare parts catalogue for your products, and to order your parts and licences directly online.

