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# LHM 550

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

## LIEBHERR

**Mobile harbour crane**

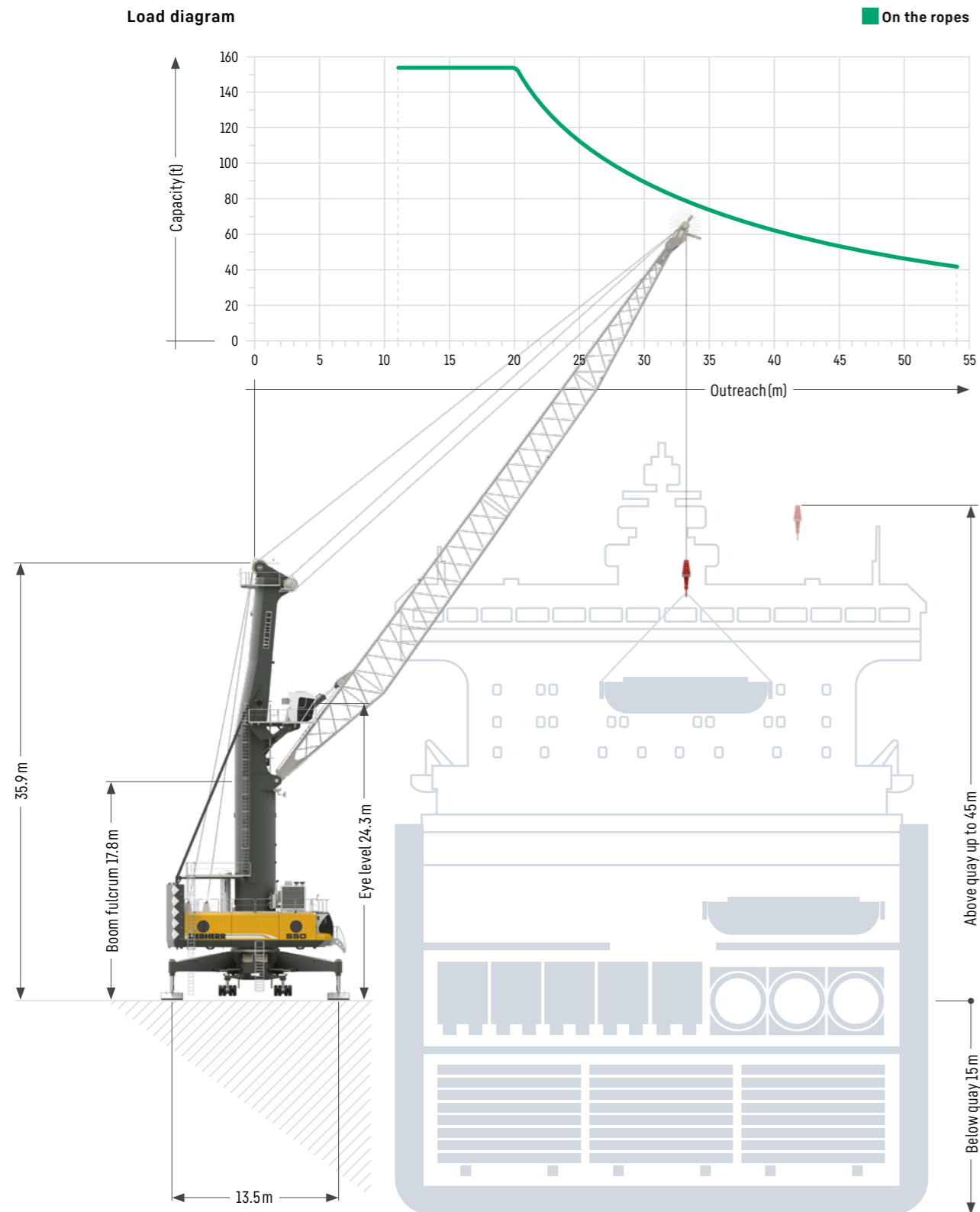
**Maximum  
lifting capacity**  
154 t

**Maximum  
outreach**  
54 m

**Ship size**  
New Panamax,  
Capesize

# Main dimensions

Heavy lift operation



# Lifting capacities

Heavy lift operation

Maximum crane capacity 154 t

Outreach (m)	Hook operation
	On the ropes (t)
11	154.0
12	154.0
13	154.0
14	154.0
16	154.0
18	154.0
20	144.9
22	130.5
24	117.9
26	107.2
28	97.7
30	89.2
32	82.3
34	76.0
36	70.7
38	66.0
40	62.0
42	58.4
44	55.2
46	52.2
48	49.3
50	46.4
52	43.6
54	40.9

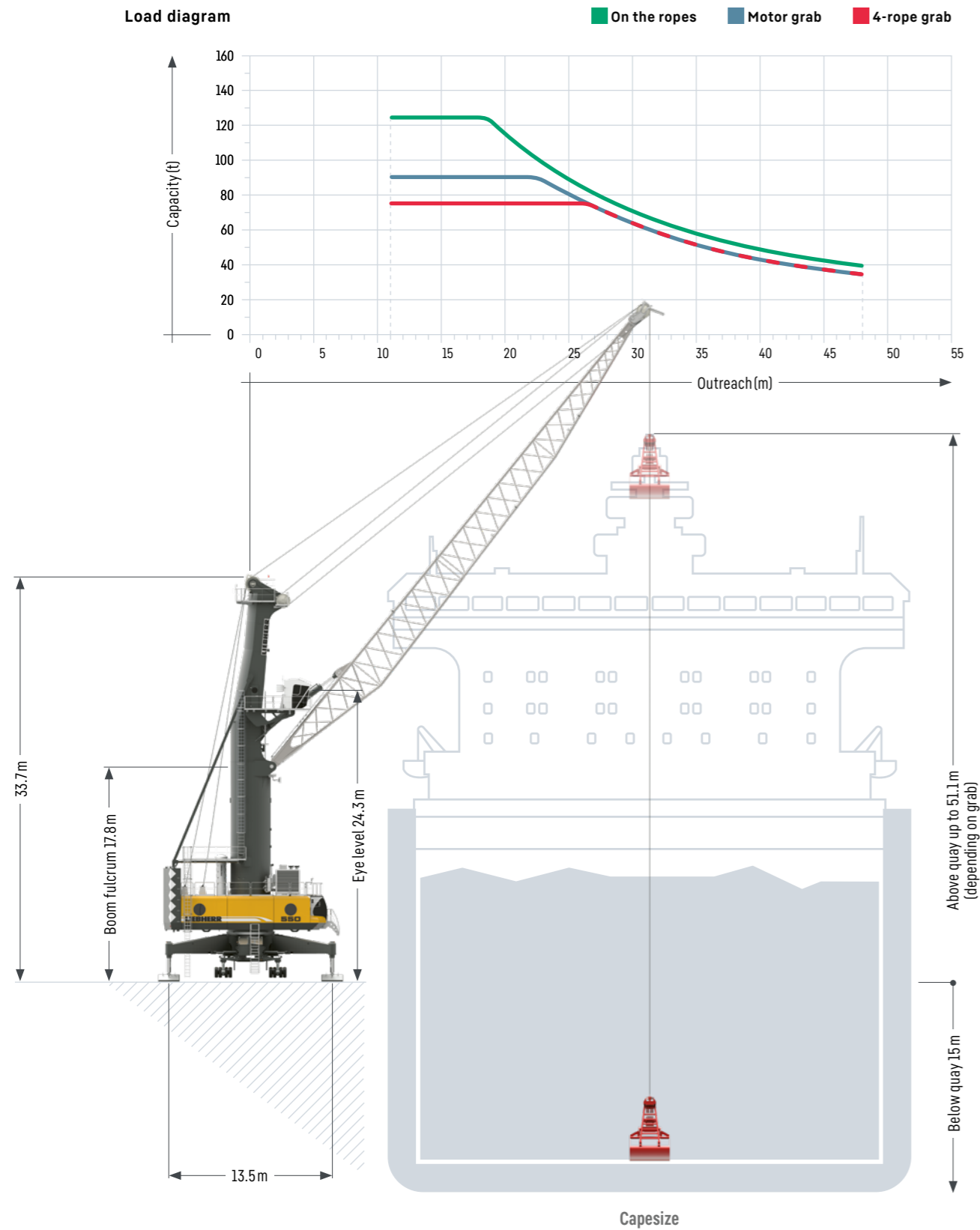
Weight rotator 4.0 t

**Project cargo & heavy lift up to 154 tonnes**

Safety and precision are the most important criteria when lifting heavy goods.

# Main dimensions

## Bulk operation



# Lifting capacities

## Bulk operation

### Maximum crane capacity 124 t

Outreach (m)	Maximum crane capacity 124 t		
	Hook operation (t)	Grab operation (t)	Motor grab (t)
11 - 18	124.0	75.0	90.0
19	120.5	75.0	90.0
20	114.5	75.0	90.0
22	103.1	75.0	90.0
23	97.9	75.0	88.1
24	93.1	75.0	83.8
25	88.7	75.0	79.9
26	84.7	75.0	76.2
27	81.0	72.9	72.9
28	77.2	69.5	69.5
29	73.7	66.3	66.3
30	70.5	63.4	63.4
31	67.6	60.9	60.9
32	65.0	58.5	58.5
33	62.5	56.2	56.2
34	60.1	54.1	54.1
36	55.8	50.3	50.3
38	52.2	47.0	47.0
40	49.0	44.1	44.1
42	46.2	41.5	41.5
44	43.6	39.3	39.3
46	41.2	37.1	37.1
48	38.9	35.0	35.0

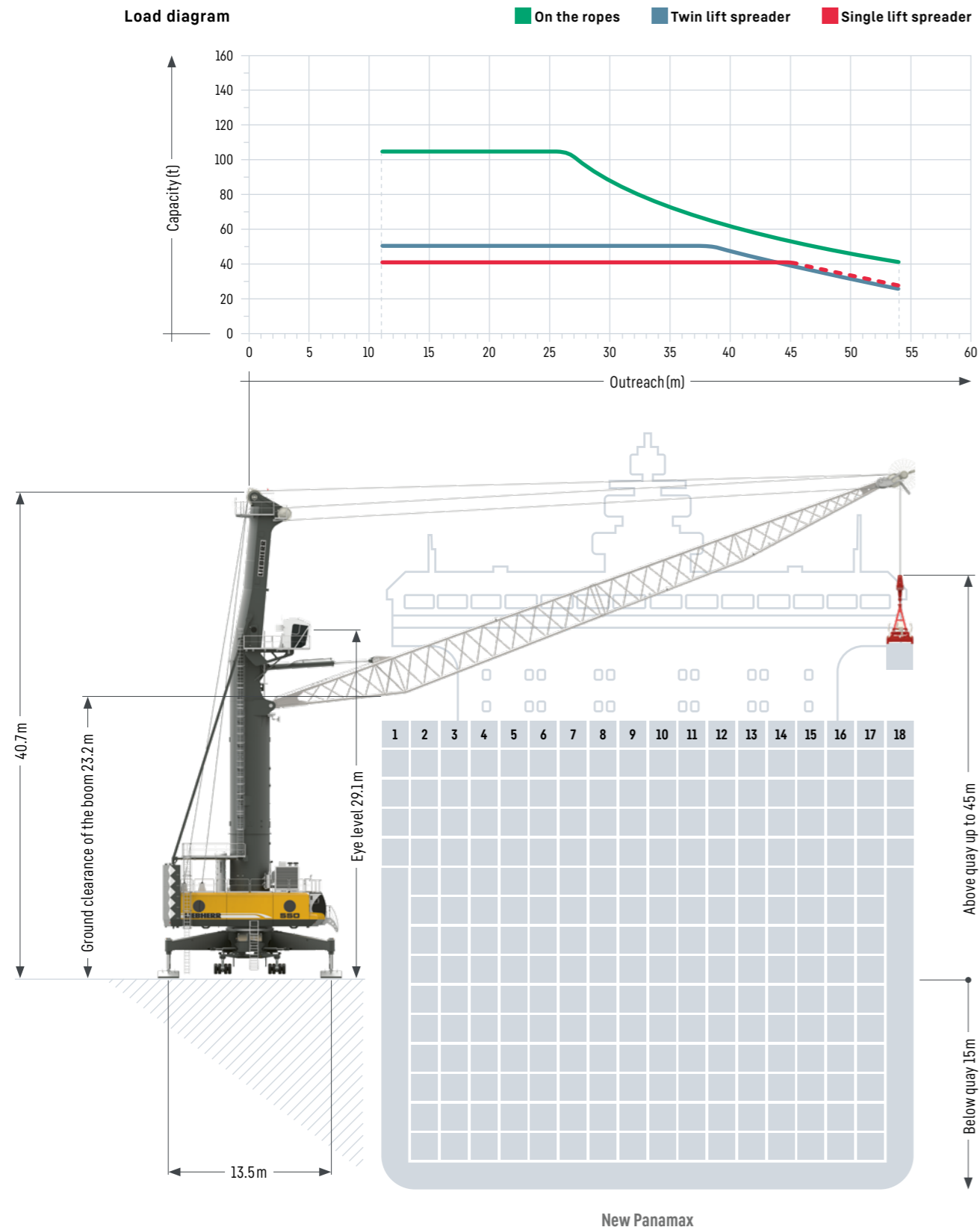
Weight ramshorn hook 3.8t; Weight rotator 4.0t

## Standard configuration – Turnover up to 1,500 t per hour

The powerful hydrostatic transmission and advanced Liebherr electronics ensure short, productive working cycles during bulk handling.

# Main dimensions

## Container operation



# Lifting capacities

## Container operation

### Maximum crane capacity 104 t

Outreach (m)	Spreader operation under		Hook operation on the ropes
	Single lift (t)	Twin lift (t)	Heavy lift (t)
11-13	41.0	50.0	104.0
14	41.0	50.0	104.0
16	41.0	50.0	104.0
18	41.0	50.0	104.0
20	41.0	50.0	104.0
22	41.0	50.0	104.0
24	41.0	50.0	104.0
26	41.0	50.0	104.0
28	41.0	50.0	97.7
30	41.0	50.0	89.2
32	41.0	50.0	82.3
34	41.0	50.0	76.0
36	41.0	50.0	70.7
38	41.0	50.0	66.0
39	41.0	49.7	63.9
40	41.0	47.8	62.0
42	41.0	44.2	58.4
44	41.0	41.0	55.2
45	41.0	39.5	53.7
46	39.7	38.0	52.2
48	36.8	35.1	49.3
50	33.9	32.2	46.4
52	31.1	29.4	43.6
54	28.4	26.7	40.9

Weight rotator 3.5t  
 Weight fully automatic (telescopic) spreader 9t  
 Weight twin lift spreader 10.7t

### Maximum crane capacity 154 t

Outreach (m)	Spreader operation under	
	Single lift (t)	Twin lift (t)
11-13	41.0	50.0
14	41.0	50.0
16	41.0	50.0
18	41.0	50.0
20	41.0	50.0
22	41.0	50.0
24	41.0	50.0
26	41.0	50.0
28	41.0	50.0
30	41.0	50.0
32	41.0	50.0
34	41.0	50.0
36	41.0	50.0
38	41.0	50.0
39	41.0	49.2
40	41.0	47.3
42	41.0	43.7
44	41.0	40.5
45	40.7	39.0
46	39.2	37.5
48	36.3	34.6
50	33.4	31.7
52	30.6	28.9
54	27.9	26.2

Weight rotator 4.0t  
 Weight fully automatic (telescopic) spreader 9t  
 Weight twin lift spreader 10.7t

**Standard configuration – Turnover up to 32 cycles per hour**  
**Pactronic® – Turnover up to 38 cycles per hour**

Precision to perfection: With incredibly short acceleration times for all crane motions, Liebherr is the top performer in container handling.

# Technical data

## Heavy lift operation

### Capacity and classification

	Capacity	Classification
Standard operation	≤ 77t	A6
Heavy lift operation	≤ 154t	A3

### Main dimensions

Min. to max. outreach	11–54m
Height of boom fulcrum	17.8m
Tower cabin height (eye level)	24.3m
Overall height (top of tower)	35.9m
Overall length of undercarriage	20.7m
Overall width of undercarriage	6.5m
Number of axle sets (standard)	20
Number of axle sets (optional)	24

### Working speeds

Hoisting / lowering	0 – 120m/min
Slewing	0 – 1.6rpm
Luffing (average horizontal speed)	0 – 55m/min
Travelling	0 – 5.0km/h

## Bulk operation

### Capacity and classification

	Capacity	Classification
Four rope grab operation	≤ 52t	A8
Four rope grab operation	≤ 63t	A7
Motor grab	≤ 52t	A8

### Main dimensions

Min. to max. outreach	11–48m
Height of boom fulcrum	17.8m
Tower cabin height (eye level)	24.3m
Overall height (top of tower)	33.7m
Overall length of undercarriage	20.7m
Overall width of undercarriage	6.5m
Number of axle sets (standard)	18
Number of axle sets (optional)	24

### Working speeds

Hoisting / lowering	0 – 120m/min
Slewing	0 – 1.6rpm
Luffing (average horizontal speed)	0 – 55m/min
Travelling	0 – 5.0km/h

### Propping arrangements

Standard supporting base	13.5m x 13.5m
Standard pad dimension	4.0 x 5.5m x 1.8m
Standard supporting area of pads	9.9m <sup>2</sup>

Optional size of supporting pads and bases on request

### Quay load arrangements

Uniformly distributed load	1.6t/m <sup>2</sup>
Max. load per tyre	5.8t

Due to a unique undercarriage design the quay loads specified above can even be reduced. Pad sizes, supporting base and the number of axle sets can easily be adapted to comply with the most stringent quay load restrictions.

### Weight

Total weight of crane in heavy lift version (154t winch, 54m boom, Pactronic <sup>®</sup> )	approx. 444t
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### Hoisting heights

Above quay at minimum radius	51.1m
Above quay at maximum radius	31.5m
Below quay level (approx.)	15.0m

### Propping arrangements

Standard supporting base	13.5m x 13.5m
Standard pad dimension	4.0 x 5.5m x 1.8m
Standard supporting area of pads	9.9m <sup>2</sup>

Optional size of supporting pads and bases on request

### Quay load arrangements

Uniformly distributed load	1.7t/m <sup>2</sup>
Max. load per tyre	5.8t

Due to a unique undercarriage design the quay loads specified above can even be reduced. Pad sizes, supporting base and the number of axle sets can easily be adapted to comply with the most stringent quay load restrictions.

### Weight

Total weight of crane in bulk version (124t winch, 48m boom, Pactronic <sup>®</sup> )	approx. 400t
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### Hoisting heights

Above quay at minimum radius	51.1m
Above quay at maximum radius	29.3m
Below quay level (approx.)	15.0m

## Container operation

### Capacity and classification

	Capacity	Classification
Standard operation	≤ 77t	A6
Container operation	≤ 63t	A7

### Main dimensions

Min. to max. outreach	11–54m
Height of boom fulcrum	22.6m
Tower cabin height (eye level)	29.1m
Overall height (top of tower)	40.7m
Overall length of undercarriage	20.7m
Overall width of undercarriage	6.5m
Number of axle sets (standard)	20
Number of axle sets (optional)	24

### Working speeds

Hoisting / lowering	0 – 120m/min
Slewing	0 – 1.6rpm
Luffing (average horizontal speed)	0 – 55m/min
Travelling	0 – 5.0km/h

### Propping arrangements

Standard supporting base	13.5m x 13.5m
Standard pad dimension	5.5m x 1.8m
Standard supporting area of pads	9.9m <sup>2</sup>

Optional size of supporting pads and bases on request

### Quay load arrangements

Uniformly distributed load	1.6t/m <sup>2</sup>
Max. load per tyre	5.8t

Due to a unique undercarriage design the quay loads specified above can even be reduced. Pad sizes, supporting base and the number of axle sets can easily be adapted to comply with the most stringent quay load restrictions.

### Weight

Total weight of crane in container version (154t winch, 54m boom, 4.8m tower extension, Pactronic <sup>®</sup> )	approx. 454t
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### Hoisting heights

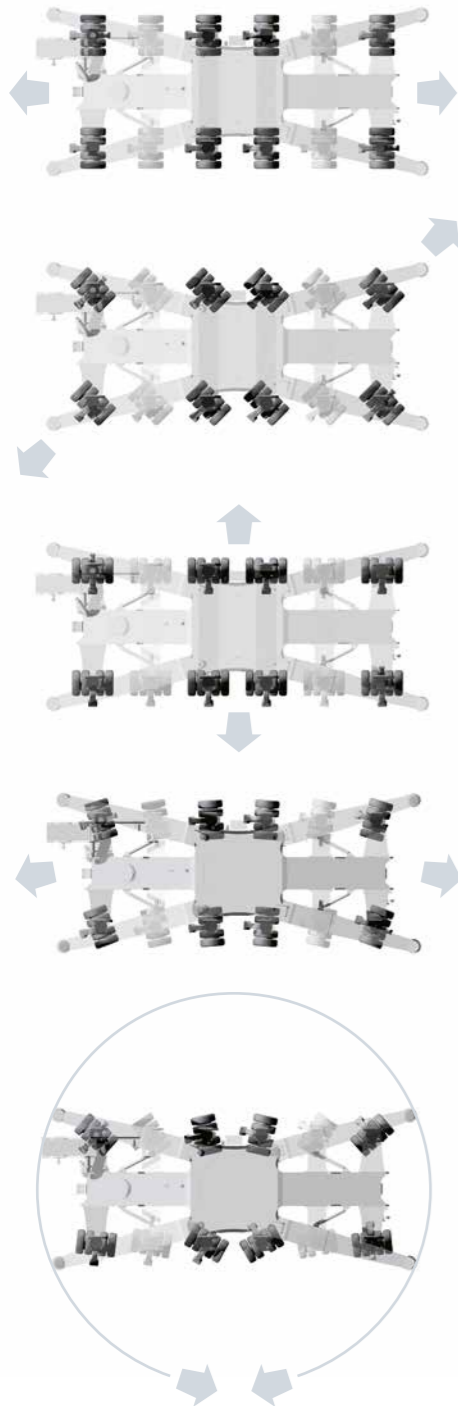
Above quay at minimum radius	51.1m
Above quay at maximum radius	36.3m
Below quay level (approx.)	15.0m

# Undercarriage

## Mobility

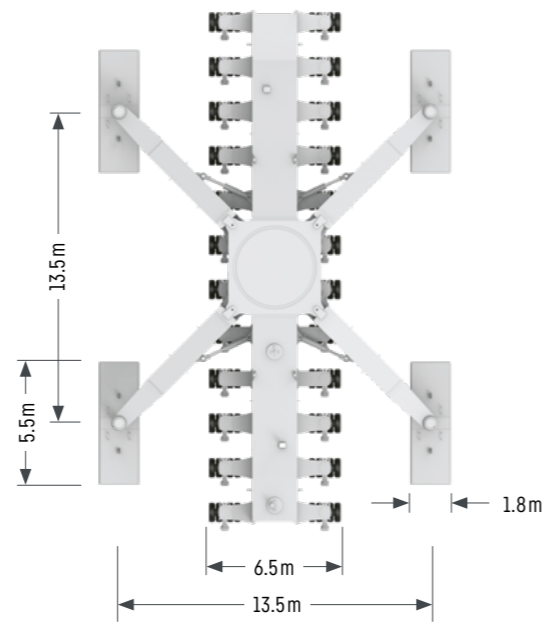
- Outstanding mobility and manoeuvrability
- Curves at any possible radii and even slewing on the spot

## Schematic diagram



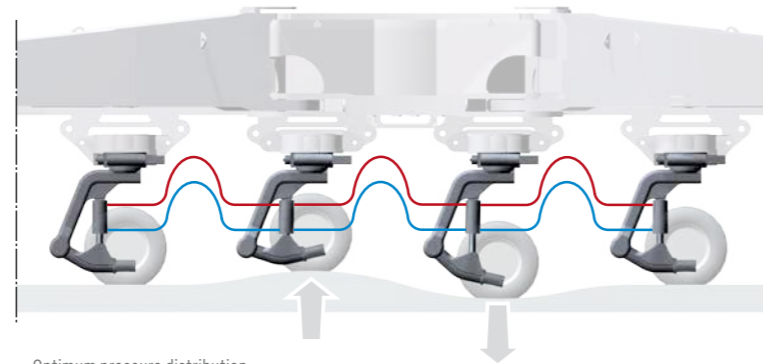
## Modular propping system

- Minimised stress and strain of undercarriage due to cruciform support base which directs the load path from boom tip to quay
- Modular system allows further reduction of quay loads by installing additional axle sets
- Easy adaptation to various sizes of support pads and bases



## Hydraulic load distribution

- Hydraulic suspension avoids overloading of individual wheel sets
- Standard trailer tyres making requisition of spares economical and time-saving
- Increased lifetime of tyres due to individually steerable wheel sets



Optimum pressure distribution and adaption of wheel sets on uneven surfaces

# Optional equipment

## Additional products and services

- Pactronic® - power by accumulator and electronics
- SmartGrip - intelligent grabbing
- Cycoptronic® - anti-sway system
- Teach-In - semi-automatic point to point system
- Sycratronic® - synchronizing crane control system
- Vertical Line Finder - diagonal pull preventing system
- Collision alert system
- LiDAT® - smartApp
- Economy software - for optimised fuel consumption
- Video monitoring system
- Radio remote control
- Autopropping undercarriage
- Cyclone air-intake system for the engine
- Low temperature package
- Customer-specific painting & logo
- Additional (driven) axle sets
- Axle sets equipped with foamed tyres
- Different supporting bases and pad sizes
- Tower extension - 4.8 m
- And many more as per customers' requirements



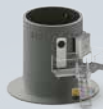
# Practical solutions



LPS 550



LFS 550



LHM 550



LPM 550



LBS 550



LHM 550 on barge

## Liebherr develops and produces special designs and solutions to meet customer-specific requirements

- The Liebherr Portal Crane (LPS) is an efficient combination of a space-saving portal (mounted on rails) and the proven mobile harbour crane concept. Particularly on narrow quays, individual portal solutions permit (railway) trains and (road) trucks to travel below the portal.
- Liebherr floating cranes (LBS) can be used for transshipment and midstream operation between ocean-going vessels and river barges on different types of waterways, including those having no or few quays. In addition, the LBS solution allows direct cargo transfer from ship to shore – especially when quays reach capacity limits.
- Depending on customer specifications, the LBS range may have varying lifting capacities due to tailor-made design solutions.
- Liebherr Fixed Slewing Cranes (LFS) are an efficient combination of a mobile harbour crane upper carriage and a fixed pedestal. LFS cranes provide an economical and space-saving solution for the installation on quaysides and jetties, especially where room for manoeuvring is limited and low ground pressure is essential. Additionally LFS solutions are also ideally suited for the installation on crane barges.
- The Liebherr Portal Mobile Crane (LPM) is the perfect combination of a space-saving portal undercarriage, efficient mobile harbour crane technology and unrestricted mobility. A gantry on rubber tyres enables the crane to be travelled from one quay to another. Supporting pads allow the crane to be used on quays with or without rail tracks.