

EN



LHM 280

www.liebherr.com

LIEBHERR

Mobile harbour crane

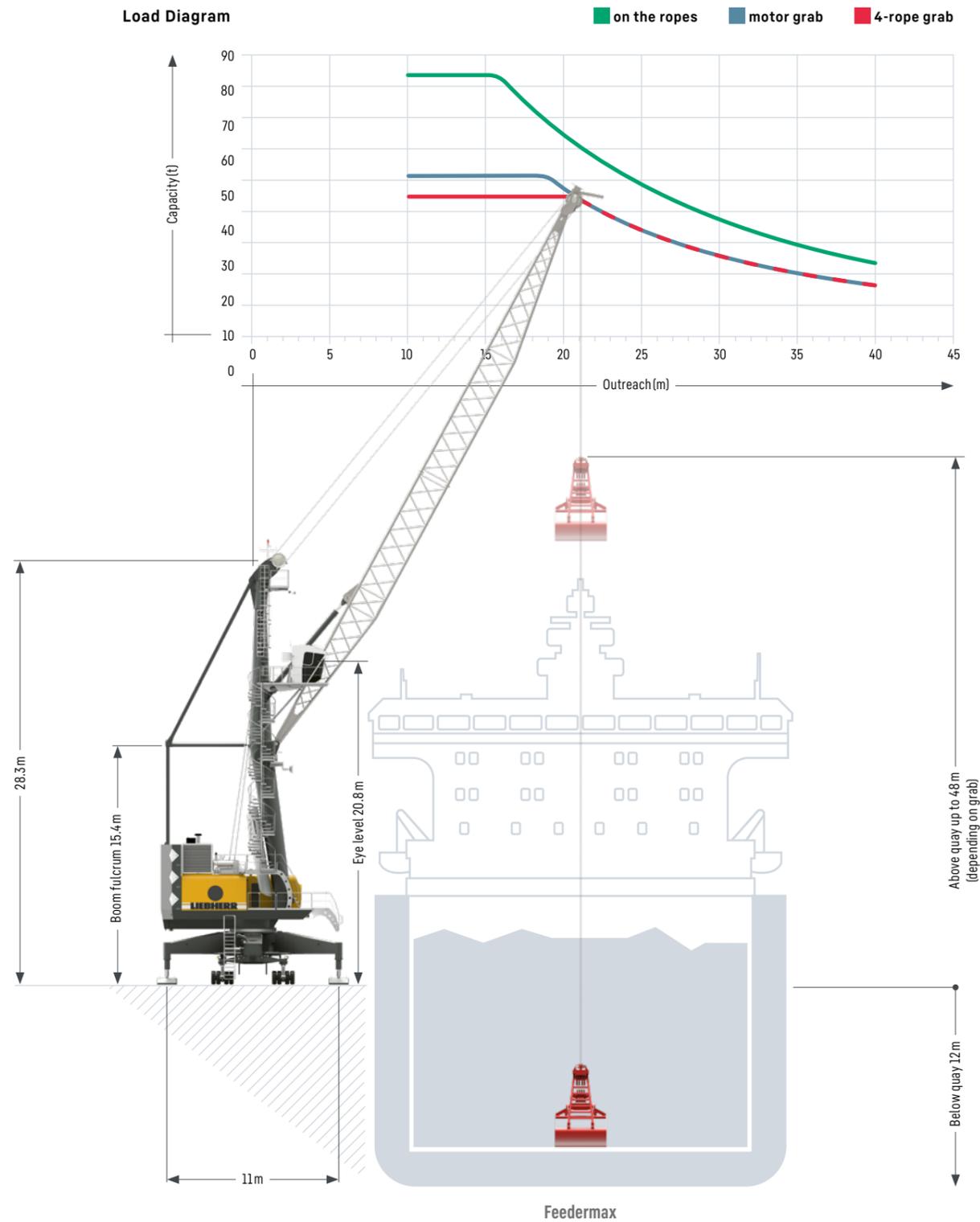
**Maximum
lifting capacity**
84 t

**Maximum
outreach**
40 m

Ship size
Feedermax,
Handymax

Main dimensions

Bulk operation



Lifting capacities

Bulk operation

Maximum crane capacity 84 t

Outreach (m)	Grab operation		
	Hook operation on the ropes (t)	4-rope grab (t)	motor grab (t)
10	84.0	45.0	52.0
11	84.0	45.0	52.0
12	84.0	45.0	52.0
13	84.0	45.0	52.0
14	84.0	45.0	52.0
15	84.0	45.0	52.0
16	81.8	45.0	52.0
17	76.5	45.0	52.0
18	72.8	45.0	51.7
19	68.3	45.0	48.5
20	65.1	45.0	46.3
21	62.2	44.2	44.2
22	58.6	41.7	41.7
23	55.0	39.1	39.1
24	51.4	36.5	36.5
25	48.5	34.5	34.5
26	45.6	32.4	32.4
28	40.7	29.0	29.0
30	36.6	26.0	26.0
32	33.1	23.5	23.5
34	30.1	21.4	21.4
36	27.4	19.5	19.5
38	25.1	17.9	17.9
40	22.6	16.1	16.1

Weight ramshorn hook 3.0t; Weight

Maximum crane capacity 64 t

Outreach (m)	Grab operation		
	Hook operation on the ropes (t)	4-rope grab (t)	motor grab (t)
10	64.0	35.0	42.0
11	64.0	35.0	42.0
12	64.0	35.0	42.0
13	64.0	35.0	42.0
14	64.0	35.0	42.0
15	64.0	35.0	42.0
16	64.0	35.0	42.0
17	64.0	35.0	42.0
18	64.0	35.0	42.0
19	64.0	35.0	42.0
20	64.0	35.0	42.0
21	64.0	35.0	42.0
22	58.6	35.0	41.7
23	55.0	35.0	39.1
24	51.4	35.0	36.5
25	48.5	34.5	34.5
26	45.6	32.4	32.4
28	40.7	29.0	29.0
30	36.6	26.0	26.0
32	33.1	23.5	23.5
34	30.1	21.4	21.4
36	27.4	19.5	19.5
38	25.1	17.9	17.9
40	22.6	16.1	16.1

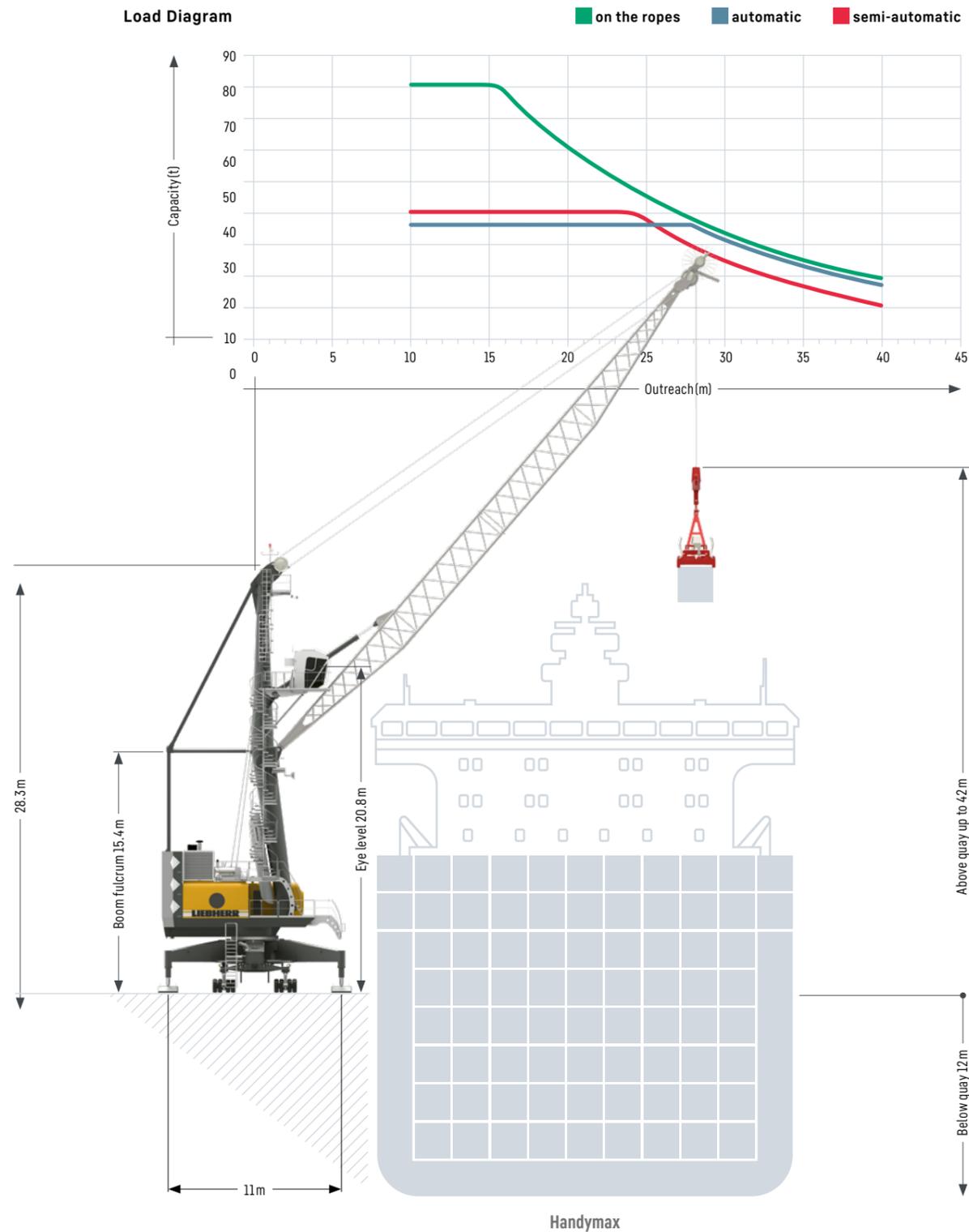
Weight ramshorn hook 3.0t; Weight rota

Professional bulk handling – Turnover up to 1,000 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 84 t

Outreach (m)	Hook operation	Capacity under 40' spreader	
	on the ropes (t)	automatic (t)	semi-automatic (t)
10	84.0	41.0	36.0
11	84.0	41.0	36.0
12	84.0	41.0	36.0
13	84.0	41.0	36.0
14	84.0	41.0	36.0
15	84.0	41.0	36.0
16	81.8	41.0	36.0
17	76.5	41.0	36.0
18	72.8	41.0	36.0
19	68.3	41.0	36.0
20	65.1	41.0	36.0
21	62.2	41.0	36.0
22	58.6	41.0	36.0
23	55.0	41.0	36.0
24	51.4	39.9	36.0
25	48.5	37.0	36.0
26	45.6	34.1	36.0
28	40.7	29.2	35.6
30	36.6	25.1	31.5
32	33.1	21.6	28.0
34	30.1	18.6	25.0
36	27.4	15.9	22.3
38	25.1	13.6	20.0
40	22.6	11.1	17.5

Maximum crane capacity 64 t

Outreach (m)	Hook operation	Capacity under 40' spreader	
	on the ropes (t)	automatic (t)	semi-automatic (t)
10	64.0	41.0	36.0
11	64.0	41.0	36.0
12	64.0	41.0	36.0
13	64.0	41.0	36.0
14	64.0	41.0	36.0
15	64.0	41.0	36.0
16	64.0	41.0	36.0
17	64.0	41.0	36.0
18	64.0	41.0	36.0
19	64.0	41.0	36.0
20	64.0	41.0	36.0
21	62.2	41.0	36.0
22	58.6	41.0	36.0
23	55.0	41.0	36.0
24	51.4	39.9	36.0
25	48.5	37.0	36.0
26	45.6	34.1	36.0
28	40.7	29.2	35.6
30	36.6	25.1	31.5
32	33.1	21.6	28.0
34	30.1	18.6	25.0
36	27.4	15.9	22.3
38	25.1	13.6	20.0
40	22.6	11.1	17.5

Weight rotator 2.5t
 Weight fully automatic (telescopic) spreader 9t
 Weight semi-automatic spreader 1.3t (20ft), 2.6t (40ft)

Professional container handling – Turnover up to 35 cycles per hour

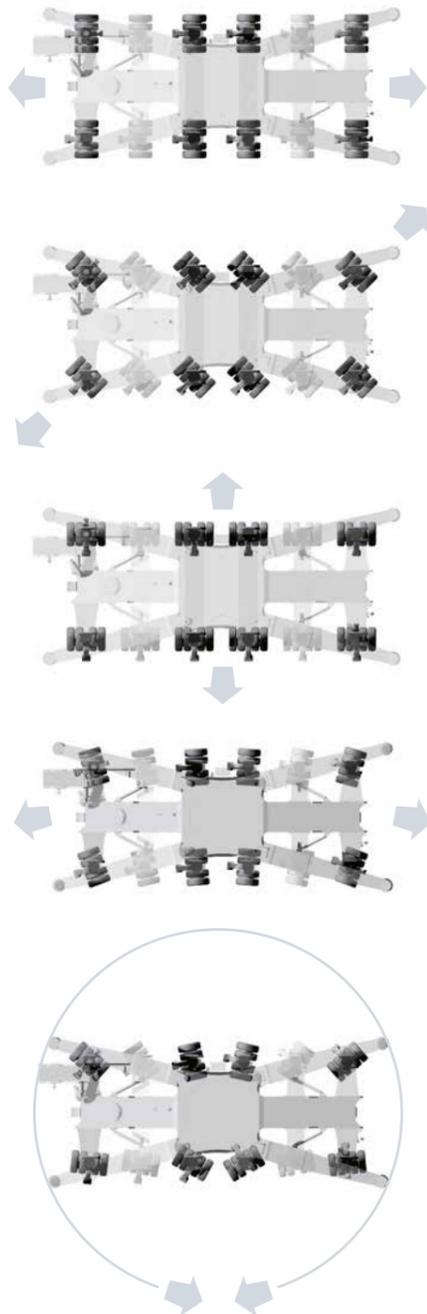
Precision to perfection: With incredibly short acceleration times for all crane motions, Liebherr is the top performer in container handling.

Undercarriage

Mobility

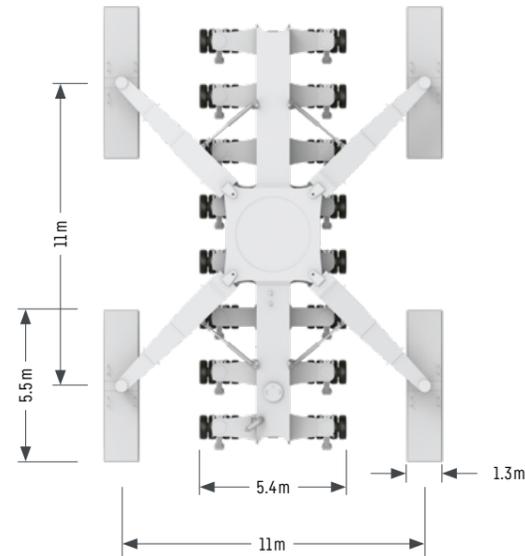
- Outstanding mobility and manoeuvrability
- Curves at any possible radii and even slewing on the spot

Schematic diagram



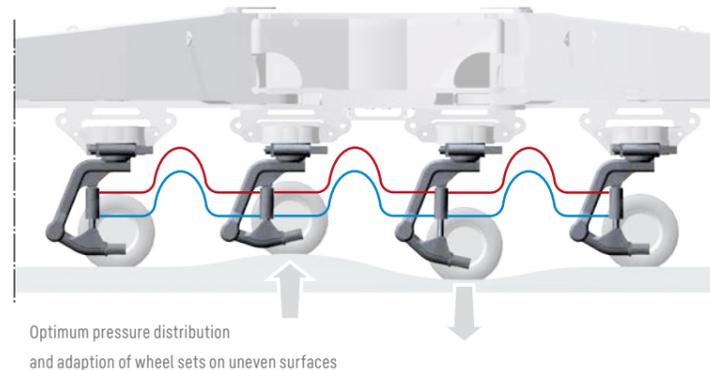
Modular propping system

- 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



Technical data

Capacity and Classification

	Capacity	Classification
Four rope grab operation	≤ 36t	A8
Four rope grab operation	≤ 45t	A7
Motor grab operation	≤ 45t	A7
Container operation	≤ 55t	A6
Heavy lift operation	≤ 84t	A4

Main Dimensions

Min. to max. outreach	10 – 40m
Height of boom fulcrum	15.4m
Tower cabin height (eye level)	20.8m
Overall height (top of tower)	28.3m
Overall length of undercarriage	16.2m
Overall width of undercarriage	5.4m

Working Speeds

Hoisting / lowering	0 – 115 m/min
Slewing	0 – 1.6 rpm
Luffing (average horizontal speed)	0 – 50 m/min
Travelling	0 – 5.4 km/h

Propping Arrangements

Standard supporting base	11.0m x 11.0m
Standard pad dimension	5.5m x 1.3m
Standard supporting area of pads	7.15m ²
Optional size of supporting pads and bases on request	

Quay Load Arrangements

Uniformly distributed load	1.63t/m ²
Max. load per tyre	5.0t

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 LHM 280	approx. 241t
-------------------------------	--------------

Hoisting Heights

Above quay at minimum radius	48.0m
Above quay at maximum radius	22.0m
Below quay level (approx)	12.0m

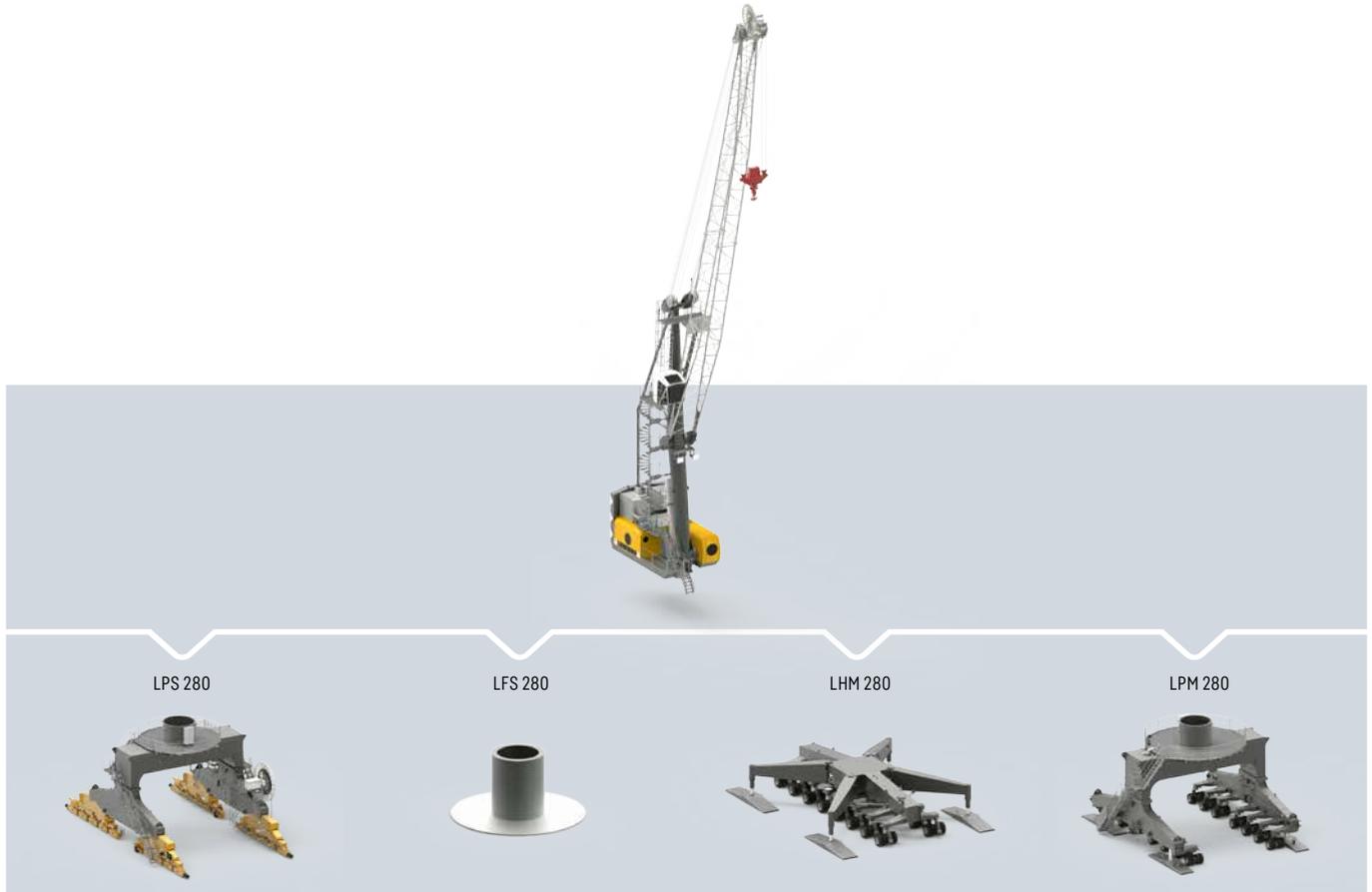
Optional Equipment

Additional products and services

- Cycoptronic® - anti-sway system
- SmartGrip - intelligent grabbing
- 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
- And many more as per customers' requirements

Practical solutions



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 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. The LPM offers the same 360-degree mobility as the LHM. Driving in longitudinal, diagonal or transverse direction. Performance of conventional steering or slewing on the spot is possible and provided as standard.