

LPS 420 E

All-electric
portal crane

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LIEBHERR

Mobile harbour crane



EN



Maximum lifting capacity
124 t



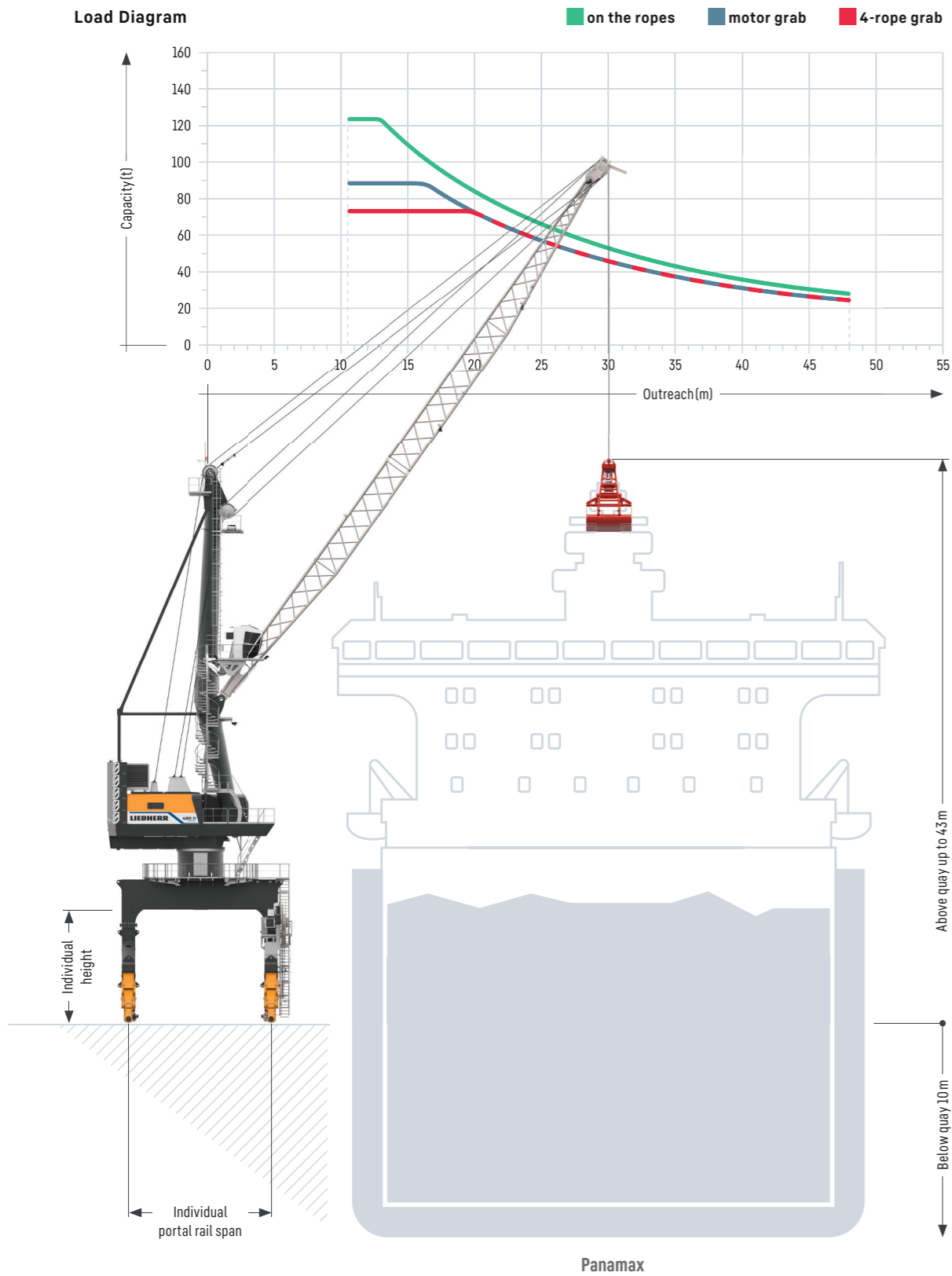
Maximum outreach
48 m



Ship size
Panamax,
Post-Panamax

Main dimensions

Bulk operation



Lifting capacities

Bulk operation

Lifting capacity 124 t

Outreach (m)	Hook operation		
	on the ropes (t)	4-rope grab (t)	motor grab (t)
10.5	124.0	75.0	90.0
11	124.0	75.0	90.0
12	124.0	75.0	90.0
13	117.6	75.0	90.0
14	111.5	75.0	90.0
15	105.6	75.0	90.0
16	100.1	75.0	90.0
18	90.0	75.0	81.0
19	85.3	75.0	76.8
20	81.0	72.9	72.9
22	73.1	65.8	65.8
24	66.2	59.6	59.6
26	60.2	54.2	54.2
28	55.1	49.5	49.5
30	50.6	45.5	45.5
32	48.6	42.1	42.1
34	43.4	39.1	39.1
36	40.5	36.5	36.5
38	38.0	34.2	34.2
40	35.7	32.1	32.1
42	33.5	30.2	30.2
44	31.4	28.3	28.3
46	29.3	26.3	26.3
48	27.3	24.5	24.5

Weight rotator 3.5t

Lifting capacity 84 t

Outreach (m)	Hook operation		
	on the ropes (t)	4-rope grab (t)	motor grab (t)
10.5	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	84.0	45.0	52.0
18	84.0	45.0	52.0
19	84.0	45.0	52.0
20	81.0	45.0	52.0
22	73.1	45.0	52.0
24	66.2	45.0	52.0
26	60.2	45.0	52.0
28	55.1	45.0	49.5
30	50.6	45.0	45.5
32	48.6	42.1	42.1
34	43.4	39.1	39.1
36	40.5	36.5	36.5
38	38.0	34.2	34.2
40	35.7	32.1	32.1
42	33.5	30.2	30.2
44	31.4	28.3	28.3
46	29.3	26.3	26.3
48	27.3	24.5	24.5

Weight rotator 3.5t

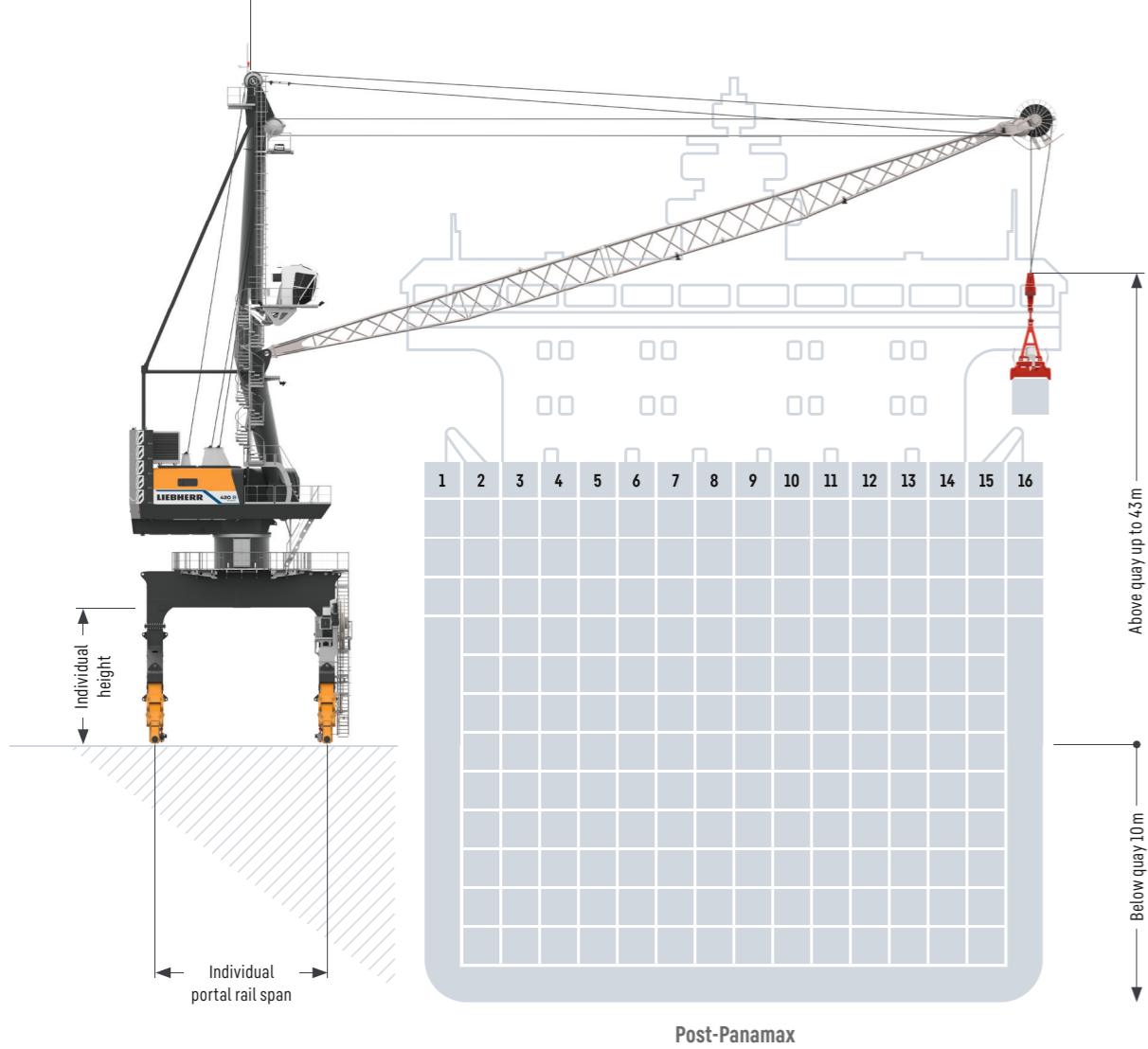
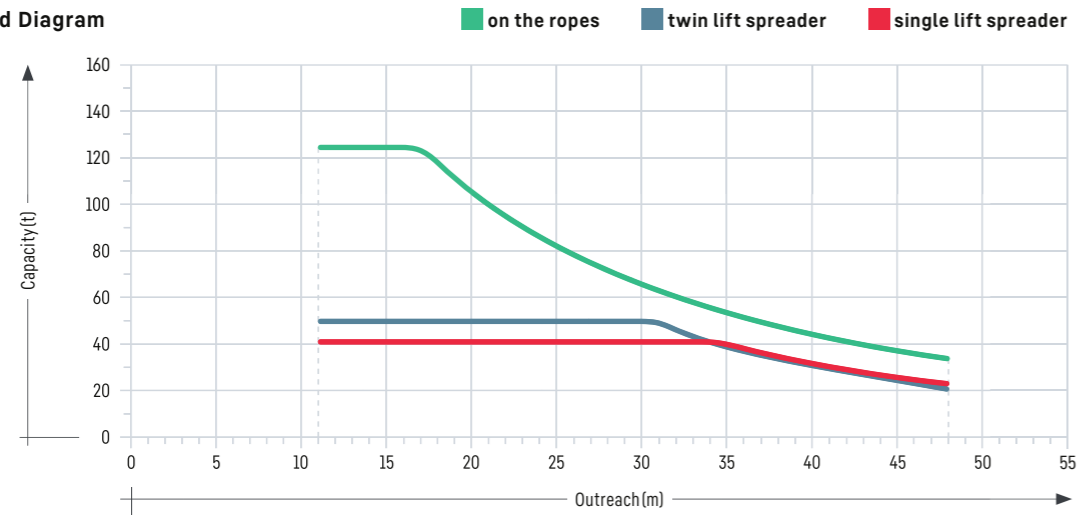
Turnover up to 1,200 t per hour

The LPS 420 E raises the bar in terms of electrical driven bulk handling performance.

Main dimensions

Container operation

Load Diagram



Lifting capacities

Container operation

Lifting capacity 124 t

Outreach (m)	Spreader operation under		Hook operation on the ropes
	Single lift (t)	Twin lift (t)	Heavy lift (t)
11	41.0	50.0	124.0
12	41.0	50.0	124.0
13	41.0	50.0	124.0
14	41.0	50.0	124.0
16	41.0	50.0	124.0
18	41.0	50.0	113.9
20	41.0	50.0	102.5
22	41.0	50.0	92.5
24	41.0	50.0	83.8
26	41.0	50.0	76.2
28	41.0	50.0	69.7
30	41.0	49.9	64.1
32	41.0	45.0	59.2
34	41.0	40.8	55.0
35	40.5	38.8	53.0
36	38.8	37.1	51.3
38	35.6	33.9	48.1
40	32.7	31.0	45.2
42	30.0	28.3	42.5
44	27.3	25.6	39.8
46	24.6	22.9	37.1
48	22.0	20.3	34.5

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

Lifting capacity 84 t

Outreach (m)	Spreader operation under		Hook operation on the ropes
	Single lift (t)	Twin lift (t)	Heavy lift (t)
11	41.0	50.0	84.0
12	41.0	50.0	84.0
13	41.0	50.0	84.0
14	41.0	50.0	84.0
16	41.0	50.0	84.0
18	41.0	50.0	84.0
20	41.0	50.0	84.0
23	41.0	50.0	84.0
24	41.0	50.0	83.8
26	41.0	50.0	76.2
28	41.0	50.0	69.7
30	41.0	49.9	64.1
32	41.0	45.0	59.2
34	41.0	40.8	55.0
35	40.5	38.8	53.0
36	38.8	37.1	51.3
38	35.6	33.9	48.1
40	32.7	31.0	45.2
42	30.0	28.3	42.5
44	27.3	25.6	39.8
46	24.6	22.9	37.1
48	22.0	20.3	34.5

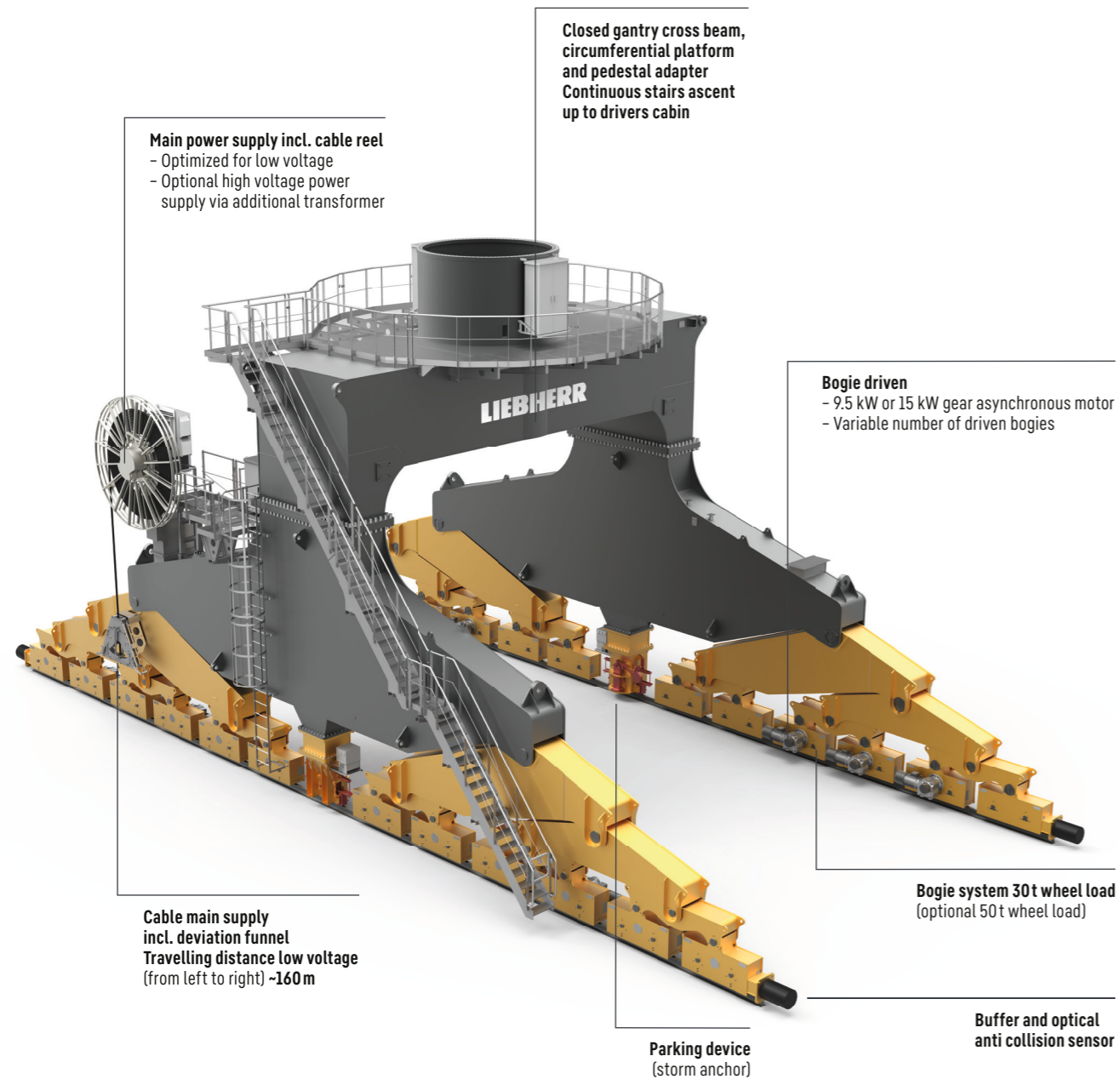
Weight rotator 3.5t
 Weight fully automatic (telescopic) spreader 9t
 Weight twin lift spreader 10.7t

Turnover up to 30 cycles per hour

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

Portal

Technical Data



Features

- Installed power: ~ 8-12 x 9.5 kW
- Travelling speed: 30 m/min
- Designed for travelling with load
- Simultaneous operation of travelling, slewing, luffing

Capacity and Classification

	Capacity	Classification
Four rope grab operation	≤ 52t	A8
Four rope grab operation	≤ 57t	A7
Motor grab operation	≤ 52t	A8
Container operation	≤ 57t	A7
Heavy lift operation	≤ 124t	A3
Standard operation	≤ 70t	A6

Working Speeds

Hoisting / lowering	0 - 100 m/min
Slewing	0 - 1.6 rpm
Luffing (20 m to 40 m)	19 seconds
Travelling	30 m/min

Hoisting Heights*

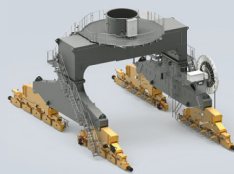
Above quay at minimum radius	43.0 m
Above quay at maximum radius	32.4 m
Below quay level (approx.)	10.0 m

* Depending on portal height

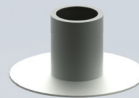
Practical solutions



LPS 420 E



LFS 420 E



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.